



Tips and advice on how to create an efficient waste prevention programme



A report conducted by the European Environmental Bureau

The European Environmental Bureau (EEB) is a federation of over 140 environmental citizens' organisations based in most EU Member States, most candidate and potential candidate countries as well as in a few neighbouring countries. These organisations range from local and national, to European and international.

EEB's aim is to protect and improve the environment by influencing EU policy, promoting sustainable development objectives and ensuring that Europe's citizens can play a part in achieving these goals. EEB stands for environmental justice and participatory democracy. Our office in Brussels was established in 1974 to provide a focal point for our members to monitor and respond to the EU's emerging environmental policy.

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Thanks

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This report is the result of the joint work of Kimberley Lobry who undertook a three month internship at the EEB and Stephane Ardit who supervised the internship.

The intention of the report was to compile the different official reports made on the subject into a concentrated guidance document on the minimum features required to ensure a useful waste prevention plan.



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Part One: Obligations and Opportunities

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I- Obligations and opportunities

A) Definitions

Most of the definitions are to be found in The Waste Framework Directive (2008/98/EC) of 19 November 2008 (WFD).

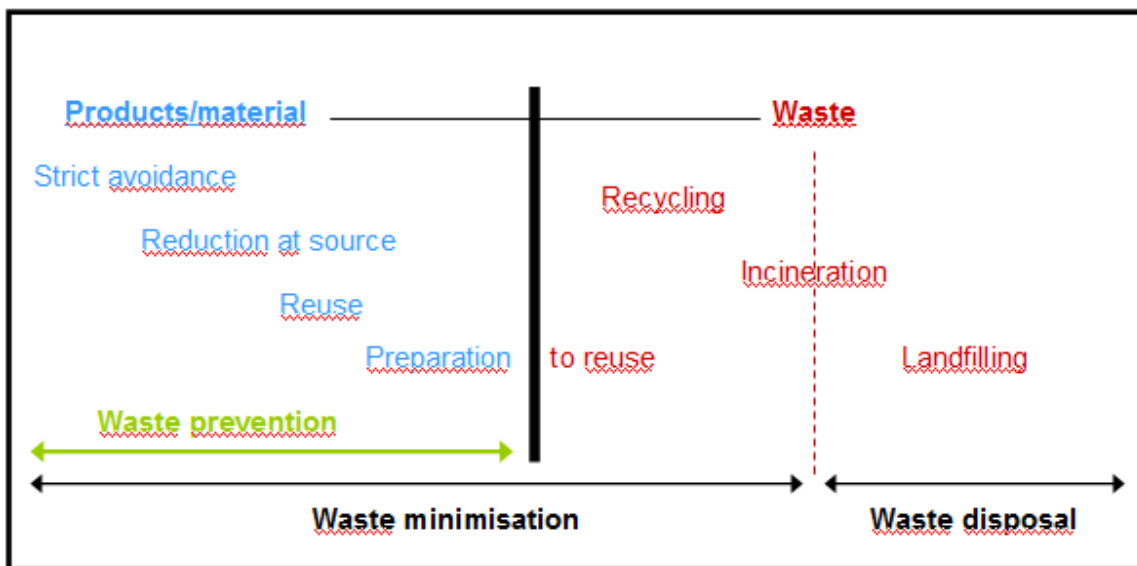
Waste:

As one of the longest running environmental issues, waste is defined by article 3.1 of the Waste Framework Directive as *'any substance or object which the holder discards or intends or is required to discard'*.

Waste prevention:

According to article 3.12 of the WFD, prevention means *'measures taken before a substance, material or product has become waste, that reduce: (a) the quantity of waste, including through the re-use of products or the extension of the life span of products; (b) the adverse impacts of the generated waste on the environment and human health; or (c) the content of harmful substances in materials and products'*.

This diagram summarizes the position of the EEB on the state of waste prevention and waste minimization:



Adapted from OECD Reference Manual, Strategic Waste Prevention, p. 38

By-product:

The Waste Framework Directive stresses the difference between waste itself and by-products that can be integrated into the creation of a new product or exported to be used elsewhere. No legal definition has been established yet but some conditions have been set in the WFD. Indeed, according to Article 5.1 waste will be considered as a by-product if the following conditions are met: (a) *further use of the substance or object is certain*; (b) *the substance or object can be used directly without any further processing other than normal industrial practice*; (c) *the substance or object is produced as an integral part of a production process*; and (d) *further use is lawful, i.e. the substance or object fulfils all relevant product, environmental and health protection requirements for the specific use and will not lead to overall adverse environmental or human health impacts*.

End of waste criteria:

In addition to 'by-product', the WFD also defines the notion of 'end of waste'. According to Article 6.1 of the WFD, '*certain specified waste shall cease to be waste [...] when it has undergone a recovery, including recycling, operation and complies with specific criteria to be developed in accordance with the following conditions: (a) the substance or object is commonly used for specific purposes; (b) a market or demand exists for such a substance or object; (c) the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and (d) the use of the substance or object will not lead to overall adverse environmental or human health impacts*'.

Therefore, 'waste remains something that has been voluntarily or necessarily discarded'¹.

In addition, a methodology to develop the criteria has been elaborated by the European Commission's Joint Research Centre and after having agreed this methodology with the Member States, the Commission is now preparing a set of end-of-waste criteria for priority waste streams².

Reminder:

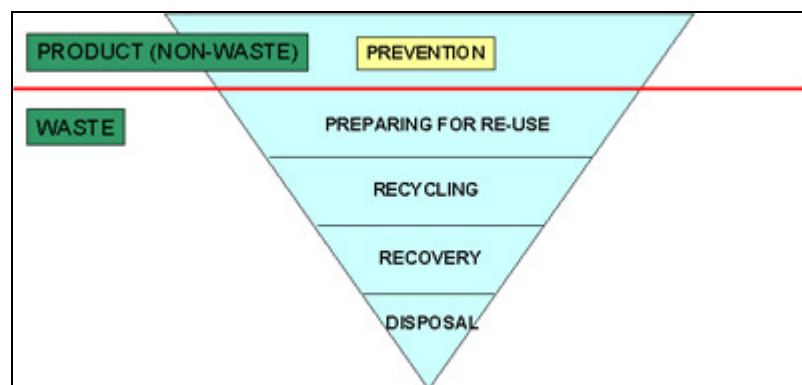
End of waste comes after prevention, getting from waste to end of waste is not prevention. The by-products are not waste, getting from waste to by-product is considered prevention.

The 'by-product' status needs to be defined and agreed with caution. It is often linked to "industrial symbiosis" or "industrial ecology" developments. For example, blast furnace slag can be associated to cement for reinforced concrete structure. It then appears a useful input material for concrete production and a routine industrial "waste" for the steel industry, therefore making it a by-product

EU waste hierarchy:

According to article 4.1 of the WFD, 'the following waste hierarchy shall apply as a priority order in waste prevention and management legislation and policy: (a) prevention; (b) preparing for re-use; (c) recycling; (d) other recovery, e.g. energy recovery; and (e) disposal.'

This hierarchy is legally binding:



Source: European Commission

Waste prevention monitoring: 'setting up indicators in order to monitor the resources allocated to the action or policy, the result of this action or policy, and to assess its efficiency regarding sustainable development'.³

¹ 'Guidelines on Waste Prevention Programmes', European Commission, DG Environment, November 2009.

² Europa website, Waste Framework Directive, End-of-waste criteria:
http://ec.europa.eu/environment/waste/framework/end_of_waste.htm.

³ PREWASTE, 'State of the art of waste prevention monitoring, Component 4: Build up of shared indicators and web tool', 30/12/2010, p. 5.

For the time being no prevention targets have been defined at EU level (though they do exist in some Member States (MS) such as Belgium and France) but because waste prevention has to be monitored, some sort of indicators will have to be agreed upon very soon. The planned review of the WFD in 2014 will tackle 'decoupling' indicators and could be an opportunity to define EU wide prevention targets.

Indicators and targets are crucial elements for proper monitoring, but they should not be considered as the only policy instruments. To monitor could also mean creating binding prevention measures (were there will be obligations of 'means' instead of obligations of 'results').

B) Legal obligations for waste prevention

In addition to defining waste prevention and waste prevention monitoring, the WFD further obligates the European Commission to submit to the European Parliament and the Council, reports and proposals for measures to support prevention activities and the implementation of waste prevention programmes. These must cover by the end of 2014, the setting of waste prevention and decoupling objectives for 2020 (Article 9).

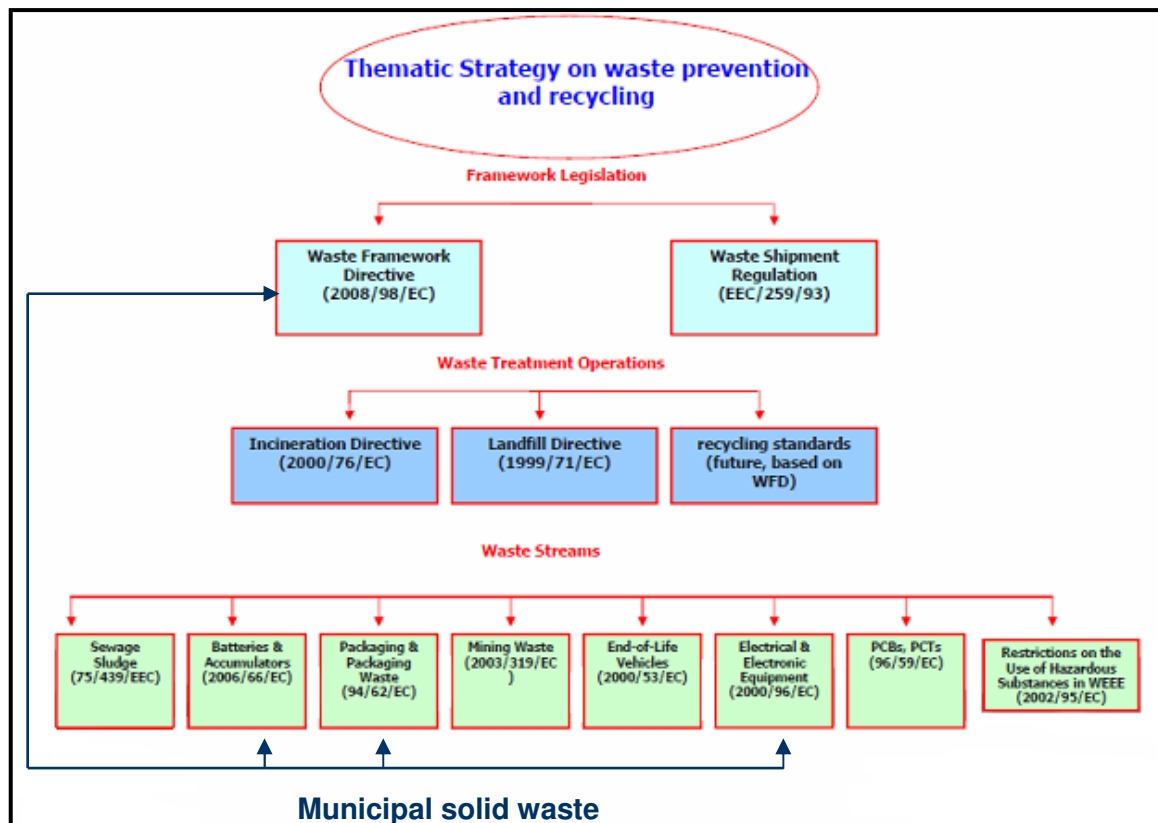
However, the most important element given by the Directive for this report is to be found on Article 29.1 setting up the deadline for the establishment of waste prevention programmes on no later than 12 December 2013. These programmes 'shall be integrated either into the waste management plans provided for in Article 28 or into other environmental policy programmes, as appropriate, or shall function as separate programmes'. In addition, the Directive adds that 'If any such programme is integrated into the waste management plan or into other programmes, the waste prevention measures shall be clearly identified'.

This report will show that the use of indicators is essential in order to monitor the future waste prevention plans. The Waste Framework Directive also gives some guidance on this by stating that 'Member States shall determine appropriate specific qualitative or quantitative benchmarks for waste prevention measures adopted in order to monitor and assess the progress of the measures and may determine specific qualitative or quantitative targets and indicators' (Article 29.3)

In addition, it is stated that the Commission '*shall create a system for sharing information on best practice regarding waste prevention and shall develop guidelines in order to assist the Member States in the preparation of the Programmes*' (Article 29.5). Examples of waste prevention measures referred to in this article are to be found on Annex IV of the Directive.

While the Waste Framework Directive (2008/98/EC) is evidently the cornerstone of EU waste prevention legislation, in order for waste prevention to remain a priority, waste prevention has also been incorporated into legislation on specific waste streams. These include for example directives on sewage sludge, on batteries and accumulators, on packaging and packaging waste, on electrical and electronic equipment, on polychlorinated biphenyl (PCBs) and polychlorinated terphenyls (PCTs) or on end-of life vehicles. Other legislation such as the Industrial Emissions Directive (IED), the REACH regulation and the Ecodesign Directive have the potential to become key instruments to favour waste prevention.

We will here focus mainly on municipal solid waste. Municipal solid waste is overlapping on some individual waste streams and can be found in some of the aforementioned waste streams: in batteries and accumulators, in packaging and packaging waste and in electrical and electronic equipment.



Source: European Commission arranged by EEB

C) Opportunities for waste prevention

In addition to legal provisions for waste prevention, some opportunities could be grasped to push forwards the prevention of waste. As was already stated, according to article 29.1 of the WFD, the EU member states have to establish a waste prevention programme by 12 December 2013. The establishment of these waste prevention programmes will take a lot of work on the part of the member states and this report aims at giving them helpful tools in order to achieve this. Also, the creation of these programmes also allows for other opportunities.

Indeed, if the member states are to establish a waste prevention plan, **why not include waste prevention in the overall waste management plans as suggested by the EU legislator** (see previous quote of art 29.1: *'shall be integrated either into the waste management plans provided for in Article 28 or into other environmental policy programmes, as appropriate...'*)? These waste management plans are to be established and reported to the EC anyway. It is the opinion of the EEB that waste prevention programmes should be dealt with as soon as possible and should be an element of the overall planning on waste management. If waste prevention programmes are established after the approval of waste management plans, there is the risk of poor coherence between the waste management plan and the waste prevention programmes. Furthermore, the operational & financial aspects of waste prevention could be neglected if they are not seen as part of an integrated approach on waste management. For too many years, prevention was a stated priority, but not necessarily handled operationally at national or local levels. If the WFD implementation is to change this situation, prevention of waste has to be taken seriously and be combined with other waste management measures. Defining Waste management plans first and then waste prevention programmes after could lead to waste prevention being a purely formal obligation/reporting not affecting the daily practices or medium term vision on waste management. In addition to legal provisions for waste prevention, some opportunities could be grasped to push forwards the prevention of waste.

A second opportunity is **to integrate prevention into the renewal of existing contracts on waste management**. Not taking prevention into account while choosing the installations or monitoring the waste amount going to facilities, could give way to a 'lock in effect'⁴, further jeopardizing prevention in the future. A possibility to lever waste prevention (but also recycling) is to impose **a maximum disposal capacity** on areas and administrations competent for waste management (e.g: *not more than X % disposal capacity of all MSW generated in concerned territories*- the X% could be reduced by stages at each revision of the waste plans).

Even better, while renewing permits and/or contracts for running facilities, the local authorities should think in terms of **'performance contracts'**. On the model of energy performance contracts, some schemes and requirements could be specified in the call for tender and waste management contracts to give incentives to waste prevention. For example, bonus/malus schemes could be designed in favor of waste prevention and a reduced price per ton treated could be applied according to staged threshold over the whole period of the contracts.

While permitting industrial installations, some mandatory features for preventing waste and reporting on dedicated actions could be imposed.

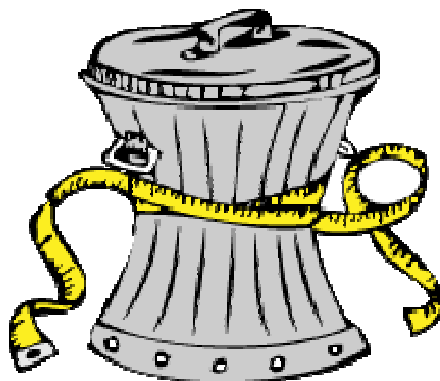
Finally, all initiatives concerning 'better resource efficiency', 'change in consumption patterns' or a 'more sustainable use of resources' are also actions that could encompass waste prevention and integrate concrete actions focused on waste prevention/reuse.

⁴ "Lock in effect" could be defined as the quasi obligation to commit to certain waste production and waste handover to big capacities that have been designed for treating large amount of waste. Return on investments and some obligations specified in the contracts can then create a barrier to reducing at source the waste production.

Part Two:

The establishment of a waste prevention programme and monitoring

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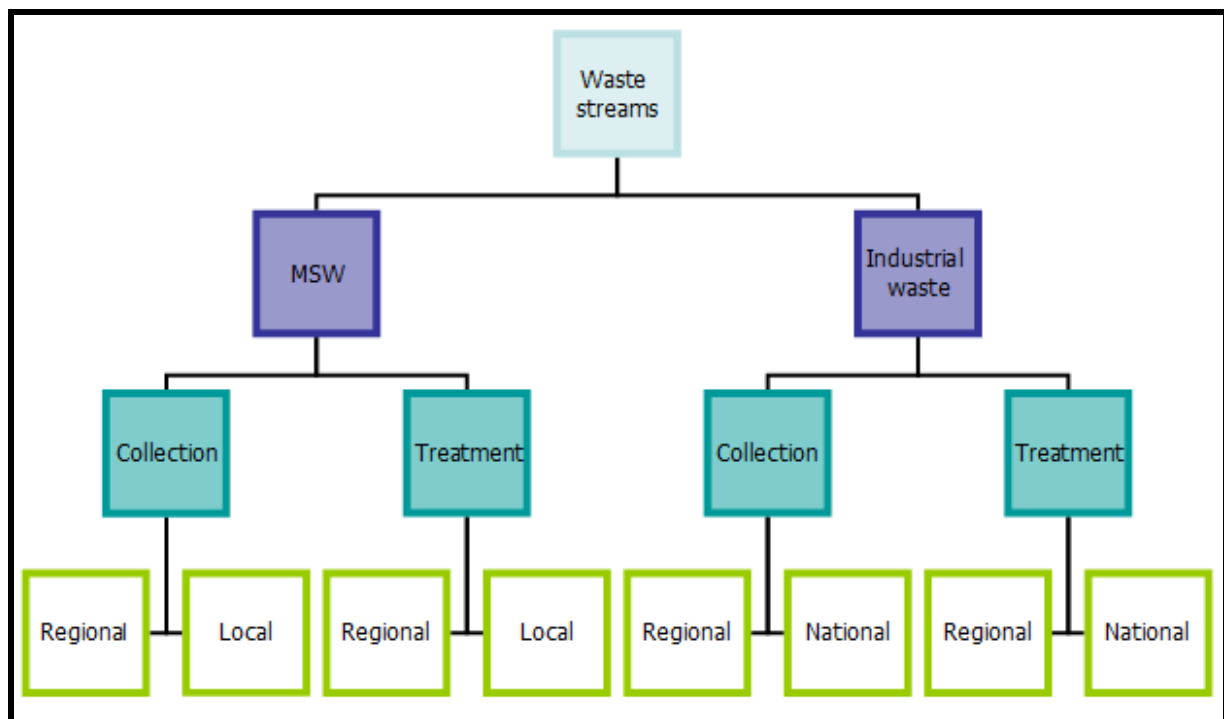
II- The establishment of a waste prevention programme and monitoring

A) Methodology

1. Different levels of action

While planning a waste prevention programme, one should be aware that the Directive makes mandatory the creation of waste prevention programme at national level. However, it is reasonable to think that the programmes will have to be applied at all administrative levels. The EEB recommends that while the waste prevention programmes have to be enforced at national level by governmental authorities, it should also be enforced at regional level by regional councils and at local level by local communities. While the report is aiming to be useful at any administrative levels, it focuses most of the times on actions that can be applied at lower levels.

The programme will also need to be differentiated according to waste streams and waste sources. Indeed, one of the essential features of efficient waste prevention programmes is to target precisely the right waste stream and couple it with the right category of actors.



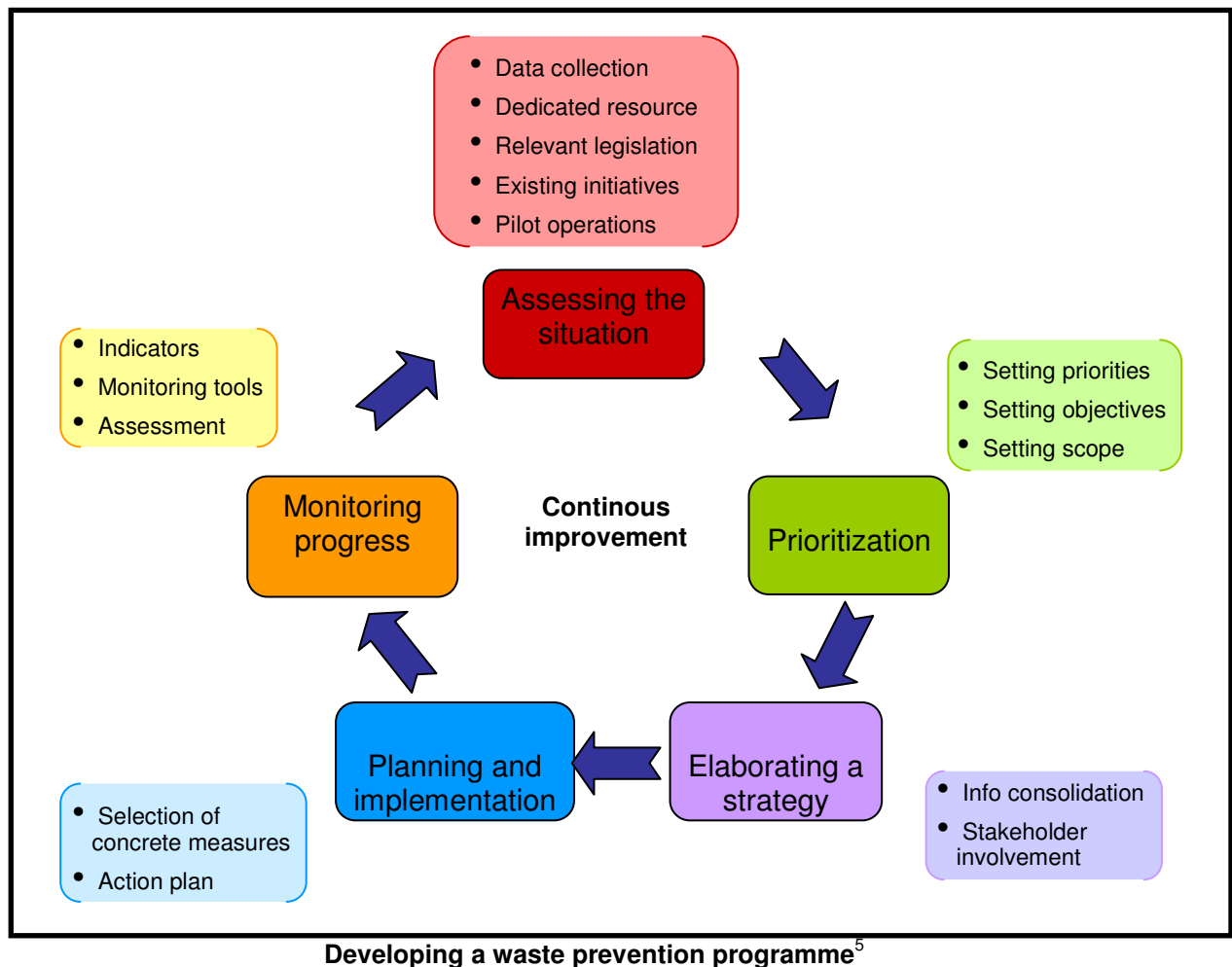
Administrative tree for different waste streams, EEB.

It has to be said that not all member states have the same administrative organization and that some work should be done to identify which administrative level is best placed to deal with each targeted waste streams. E.g: reducing harmful substances in products is rather a national policy (and EU), whereas reducing garden waste is more dependent on local situations.

In addition, the combination of different administrative levels, particularly for Municipal Solid Waste (MSW), is to be investigated. This would be especially relevant in order to cascade the objectives (e.g “goal tree” from national targets to local actions).

One should also keep in mind that industrial waste reduction is to be dealt with by competent authorities for economic development and facilities permitting.

2. Planning a waste prevention programme



1) Assessing the situation

Planning a waste prevention programme requires data collection. This begins with a territorial diagnosis where it is crucial to assess the relevant waste streams, the social demographic situation, the existing waste facilities but also to know who the local actors are and what potential resources & competencies can be mobilised.

Once this analysis stage is fulfilled, and once the available dedicated resources, the relevant legislative texts and the existing initiatives are taken into consideration, one can also integrate the eventual results of pilot operations that have taken place locally or in other regions. Indeed, pilot household operations where a sample of household is asked to reduce its waste production can show the feasibility and give an idea of potential achievements. It also serves assess how realistic/credible future initiatives may be.

2) Prioritization

Setting priorities, defining the scope and assessing the objectives of the waste prevention programme are very important elements of the preliminary phase of a waste prevention programme.

Setting priorities often means that a certain waste stream is associated with a certain category of people (e.g: bulky waste coupled with wealthy urban areas, or some type of industrial/commercial

⁵ Schema adapted from the one in the report 'Guidelines of Waste Prevention Programmes', European Commission, DG Environment, November 2009, p. 16.

waste coupled with a locally important sector, such as tourism, retail, or any traditional industry) in order for the programme to be best adapted and work the most efficiently according to local conditions. As a consequence the mere quantitative ranking may not be the best way to prioritize waste streams: **the improvement potential at the cross road between type of waste/type of public and type of existing facilities should be a main factor for setting priorities.**

Defining the scope of the waste prevention programmes will require that many different questions are answered: will the plan be an integrated part of the national or regional waste management plan or will it function as a separate programme? Will waste prevention be addressed by stakeholder, by waste stream, by phase of life cycle or globally? What role will local and regional authorities play in the national programme?

Keeping in mind that, according to the Waste Framework Directive, waste prevention programmes should aim to 'break the link between economic growth and the environmental impacts associated with the generation of waste' (Article 29.2). Also given that we should be moving towards a zero waste economy, the setting up of targets/objectives is very important. Should there be national, regional or local targets? Should there be qualitative or quantitative targets? What would be the timeframe of these targets? Should the targets be mandatory? Would the targets be general or focused on a specific sector? All these questions should be reviewed before moving towards the elaboration phase.⁶

3) Elaborating a strategy

It is important to make sure that the strategy is good enough to be widely accepted by the people it is addressed to. This is why it is important to consolidate the information gathered during the assessment stage in order to make sure that it is credible and will be accepted. This is also why it is very important to involve stakeholders as early as possible in order to allow for them to be able to participate in the process and therefore take a certain ownership of the programme. Stakeholders may be policy makers, regional and local authorities, non governmental organizations, industry professionals, consumer organizations and the general public through public consultation and/or dedicated communication.

4) Planning and implementation

There is now the time to come up with an action plan. The authorities should determine the policy options they want to implement and concrete measures should be selected. A timeline should be created, taking into account that the different stages of the waste prevention programme may take a different amount of time. The timeline should obviously take into account the final deadline of 12 December 2013 set out by the WFD. This deadline implies that the planning and decision of the waste prevention programme should be done by this date, while its implementation and evaluation can be done later on. The timeline may also take into account the requirement for an evaluation of the programme at least every six years set out in article 30 of the WFD, which means no later than 2019.⁷

5) Monitoring progress

Because what does not get measured does not get managed, it is essential to develop indicators in order to monitor and track the progress on objectives and targets and to evaluate the efficacy of waste prevention policies.⁸

The monitoring of the waste prevention programmes will actually be treated separately further down in this report.

This five step approach is supposed to lead to a continuous improvement, thus to be repeated to ensure progress (this is not a one shot exercise). But in order to actually plan a waste prevention programme, there also is a need to mobilise instruments that allow for waste prevention.

⁶ European Commission, 'Guidelines on Waste Prevention Programmes', DG Environment, November 2009, p. 17-19.

⁷ Ibid, p. 20.

⁸ Ibid, p. 21.

3. The instruments of waste prevention

To enable waste prevention, a number of different instruments can be used. They can be legal instruments, market instruments or educative instruments and **should not be used in isolation but combined**. Indeed, using only market instruments without any awareness raising campaigns on the issue would be limited in impact and ownership; or using only education without setting any targets may not create the necessary drivers for action.

It is to be noted that the prevention of waste relies more on a set of simultaneous measures, than on a unique “big” solution.

Legal instruments: target setting, bans, ecodesign, product requirements, producer responsibility

Market instruments: pay as you throw, taxation, reward scheme

Educative instruments: awareness campaigns, product information, reuse promotion

In order to offer a better understanding of what the EEB means by using these different instruments for waste prevention, here are some examples for the main categories of instruments:

➤ **Legal instruments:**

Waste prevention targets

For example in France (7% waste reduction in 5 years, measured in kg/capita). There could also be hazardous waste reduction target as in the Czech Republic.

Bans

There have been examples of this, such as banning the use of certain hazardous material for building (like asbestos).

Extended warranty for some products

An extended warranty could be an appropriate measure for some products, however, this will be difficult to set at local level.

➤ **Economic Instruments:**

Taxation

E.g: taxation of single use bags, taxation of disposable products.

Pay As You Throw

According to a Dutch study that focused on Waste Electrical and Electronic Equipment, in municipalities where the Pay As You Throw scheme was applied, the average amount of WEEE in residual waste is 50% lower than in municipalities that do not enforce the scheme. According to the study, this suggests that ‘PAYT is a strong supporter for the collection of WEEE’.⁹

Extended Producer Responsibility schemes (EPR)

Different schemes exist for EPR. Some initiatives try to integrate the prevention of waste as a criterion to take into account in EPR. E.g: the products containing hazardous require a higher producer contribution than those free of hazardous, offering the same functionality.

There are other economic instruments, such as tax rebate for longer lasting products, or incentives for green purchasing.

⁹ Huisman, J., van der Maesen, M., Eijssbouts, R.J.J., Wang, F., Baldé, C.P., Wielenga, C.A., (2012), The Dutch WEEE Flows. United Nations University, ISP – SCYCLE, Bonn, Germany, March 15, 2012.

➤ **Educational instruments:**

Educational instruments can be used for downstream or upstream prevention.

Downstream Prevention - usually concerns end users and focus on purchasing behaviors, then the use and end-of-life stages of products.

As one of the winning initiatives of the European Week for Waste Reduction 2010¹⁰, the Food Waste Reduction Challenge in St Mary's Episcopal Primary School (Scotland, UK) is a very good example of the importance of education in waste prevention. This project aimed to reduce the amount of food and packaging wasted from lunches served from the school canteen and packed lunches that the children bring from home by collecting and weighing waste at the end of every lunch.¹¹

Upstream Prevention - addresses more the life cycle of the product before being put on the market, and as such targets mainly producers and suppliers.

The UK retailer Tesco has for example hired the Less Packaging Company¹² to design the packaging of their new toy range called Carousel so that it would be made of cardboard only, therefore eliminating the extra wire tires or screws. This innovative design not only noticeably reduced the amount of packaging waste but also reduced the unpacking time of the toy to 45 seconds, which is a very good example of how you can align sustainability and practicality.

Labeling - While no mandatory scheme on labeling for waste exists, some voluntary initiatives have started to commit to waste reduction, which are associated with labeling strategies.

E.g: As a winner of the European Week for Waste Reduction 2009, the French project for the evolution of the label "Committed Business"¹³ illustrates how local business commitments can work for waste prevention. Under this label, the merchants are committed to limiting and even eliminating single-use bags, offering products that require little packaging and transport and are distributed in bulk, and supporting environmentally-friendly economic activities.

Now that a few examples of the different instruments used for waste prevention have been exposed, it is important to stress again the necessity for these instruments to be combined and not used individually. However, it is also important to find the right combination of instruments in order for them not to contradict or undermine each others expected impact.

Here are a couple of examples of such combination:

	Legal instrument	Economic instrument	Educative instrument
Home Composting (<i>not always considered prevention</i>)	Legal requirement of separate collection leading to the compost of green waste	Distribution of container of compost	Need for explanations on how to use it, otherwise: - not used properly, - complaints about the smell, - doesn't work...
→ Proposal - get the composter from a certain place where people will be there to explain how to use it.			

¹⁰ See the website for the 2010 Awards for the European Week for Waste Reduction: <http://www.ewwr.eu/2010-awards>.

¹¹ For more information: http://www.ewwr.eu/sites/default/files/Case%20studies%202010/EWWR%202010_Case%20Study_School_Scotland.pdf.

¹² The Less Packaging Company is a UK-based company that advises clients on how to optimise their packaging commercially while minimising the impact on the environment. For more information: <http://lesspackaging.net/>.

¹³ For more information: http://www.ewwr.eu/sites/default/files/EWWR_2009-case-studies_Association_Ecoscience-Provence_FR.pdf.

	Legal instrument	Economic instrument	Educative instrument
Stop advertising action	Target for paper waste reduction	Distribution of stop advertising stickers + sticking the stickers on to post boxes	Need to go further and teach people about sorting and recycling paper
→ Proposal to distribute the stickers at a cashier with people giving information about the correct ways to recycle paper in general			

B) Monitoring a waste prevention programme

According to Article 30 of the WFD, the member states have to monitor and evaluate the waste management plans and waste prevention programme at least every sixth year. In order to best comply with this requirement, the monitoring should:

- determine indicators
- determine how to measure and evaluate
- determine who will monitor
- determine whom to report to

All this should give way to the creation of a control plan.

1. Prevention indicators

The main reason for setting up indicators for waste prevention actions is to assess the compliance with political targets.¹⁴ Waste prevention indicators allow the public authorities and any other interested third party to monitor the degree to which the policy objectives are achieved. There is absolutely no point in implementing a waste prevention plan, or any plan for that matter, without tools to make sure the objectives of the plan are verifiable.

According to the European Commission, *'waste prevention indicators should support national waste prevention benchmarking processes according to the requirements of the Waste Framework Directive allowing to measure performance in a systematic process compared to a desired reference or target'*.¹⁵

In order to be effective, the chosen indicators would have to follow the RACER criteria: Relevant – Accepted – Credible – Easy – Robust.

Past experience of EU countries shows that waste prevention is not easily measured and that reliable indicators are not easy to find. It is true that there are plenty of indicators around, but the real issue is to find the RACER ones.

The Organisation for Economic Co-operation and Development (OECD), which has been working on the issue since 2000, has decided to separate the indicators into three categories, constituting the 'Pressure-State-Response' model.

¹⁴ PREWASTE, 'State of the art of waste prevention monitoring, Component 4: Build up of shared indicators and web tool', 30/12/2010, p. 28.

¹⁵ European Commission, 'Waste Prevention – Overview on indicators', DG Environment, November 2009, p.6.

Here is a non-exhaustive list of some good and bad indicators for the biowaste, construction and demolition waste and municipal solid waste streams:

Biowaste

	Good indicators	Weak indicators
Pressure	Amount of food waste generated from household Total amount in tons/year Kg/hab.year	Amount of biodegradable waste landfilled: not relevant to prevention and to be anyway reported as part of the Landfill Directive obligations
State/impact	Quality of the compost according to standards/norms	CO2e avoidance linked to less landfilling
Response/action	Number of registered home composters	Number of people who declare composting: too vague, need to make sure

Construction and demolition

	Good indicators	Weak indicators
Pressure	Total generation of construction and demolition waste compared to number of registered construction works (new buildings/refurbishment)	Amount of C&D waste landfilled in dedicated landfills (as part of C&D waste is in MSW and can be linked to reduced activity of the sector)
State/impact	Land use saved compared to BaU scenario	
	Extended lifetime of existing facility compared to BaU scenario	
Response/action	Number of construction works with sustainable/green labeling	Number of leaflets distributed to professionals (as does not say anything regarding consequent actions)

Municipal Solid Waste

	Good indicators	Weak indicators
Pressure	Total generation of MSW/cap	Total amount of waste being landfilled
	Packaging waste generation/cap	Quantity of packaging separately collected (as not a prevention indicator)
State/impact	Avoided impact linked to less waste being managed E.g: Co2 impact of waste management	Number of households declaring paying attention to waste generation
	Creation of local jobs in prevention	
	Quantity of reused products reported by certified reuse schemes	
Response/action	Number of meetings of expert groups only dedicated to waste prevention	Number of stop advertisement stickers printed
	Training people in standards for re-use and repair (number of trained people)	Total number of awareness raising actions (as not focused enough to targeted publics)
	Number of sensitized pupils/students on waste reduction	
	Budget dedicated to prevention	Total number of waste prevention events

While the difficulty to gather data in order to document indicators is often presented as an obstacle to monitor waste prevention, the need for waste prevention indicators is too important not to make an effort to generate new data when needed. Even if extensive data collection is not possible at first, one can always use estimates based on sampling strategy, pilot sites or 'sample families' extrapolation. It is important to identify the data generation technologies and the lack of data should not be an excuse to renounce to actions. Eventually a two step approach can be promoted: first getting some data using sampling technology, second set associated targets as relevant.

While this report focuses primarily on municipal solid waste, one should remember that some indicators can also be used to target industrial waste reduction. The impact and cost of industrial waste management is not negligible. Some of the indicators that can be used are:

- The total amount of waste, the total amount of hazardous/specific waste and the total amount of non hazardous/specific waste
- The expenditure for waste, the expenditure for hazardous/specific waste and the expenditure for non hazardous/specific waste

It has to be noted that targeting industrial/commercial waste can be a good starting strategy for waste prevention programmes, as the number of actors may be more limited than with household waste, the business benefits more obvious and the durability of the impact longer.

E.g: targeting retail food waste may be "easier" than addressing household food waste

2. Who and how to monitor the indicators

While the need for indicators in order to monitor waste prevention is clear, one should not forget that there is also a need to determine who will monitor selected indicators and how they are to be measured and reported.

The questions of who will collect and consolidate the data but also of who will interpret and control the indicators should be asked while creating the waste prevention programme.

The EEB believes that local prevention observatories, a collegial instance with municipality representatives, state representatives, members of the civil society such as consumers, environmentalists, industrial federation and waste management companies, can best do the job.

One should also ask the questions what calculation methods for indicators, what kind of consolidation should be made, what data source should be used, to whom should it be addressed? For data collection and monitoring, it may be good to build on the waste statistic regulation¹⁶.

The necessity of such a control plan is recognised by consultants working for the European Commission as a very important element and is mentioned in one a report by Umweltbundesamt, BiPRO, and ETC.¹⁷

It has therefore to be said that to have indicators without determining who will monitor, how the monitoring will be done and where to report the monitoring does not allow for effective monitoring. The EEB believes that there should be an explicit mention and definition of these elements in the waste prevention programmes.

C) Example of actions by waste streams

In Annex IV of the WFD is mentioned a list of prevention measures referred to in Article 29. These measures can affect the framework conditions related to the generation of waste, the design and production and distribution phase, and the consumption and use phase. While the list provides an extensive list of possible measures to be implemented, we would rather focus here on a few actions that can be replicated at national or local levels.

Biowaste:

Ecological conception of landscapes with slow-growing grass in the province of Flemish Brabant, Belgium¹⁸

The province of Flemish Brabant launched a campaign to promote the use of slow-growing grass, with for example the use of the grass 'Barkoel Koeleria Macrantha'. Sold most of the time mixed with other kind of grass, it can adapt to dry and calcareous soils thanks to its deep roots and can therefore stay green for longer in summer. While the mix of grass is 20% more expensive than the other ones, this actually pays off on the long term. Indeed, the province of Flemish Brabant noticed that the mowing frequency had decreased of 40% and that 50% less grass had to be collected. Combined with slow-growing grass, actually leaving the grass on site to decompose gives way to even better results.¹⁹

¹⁶ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:332:0001:0036:EN:PDF>. This regulation suggests several methods to establish data noticeably in art 3.

¹⁷ Umweltbundesamt, BiPRO, and ETC, 'Assessment and guidance for the implementation of EU waste legislation in Member States, Preparing a Waste Management Plan, A methodological guidance note', ENV.G.4/SER/2009/0027, 16 October 2011, p.49.

¹⁸ For more information: www.vlaamsbrabant.be.

¹⁹ ACR+ Report, 'Guide destiné aux autorités locales et régionales dans le cadre de la nouvelle directive cadre sur les déchets', November 2009 p. 40 quoting the article 'Traaggroeiend gras voor gazonhaters en een kleine afvalberg', 2009.

Composting on site at the Royal parks of London, UK (Hyde, St James's and The Green Parks and Kensington Gardens).²⁰

In the beginning of the 1990s, most of the biowaste stemming from the parks were landfilled but for environmental and economic reasons it was decided to try and compost it. The project aimed at showing that you could recycle and use biowaste from parks therefore preventing waste. The 10,000 trees of the different parks are now producing about 3 000 m³ of compost and this compost is used as mulch all around the parks. The result of the project is that almost 100% of uncontaminated biowaste produced is treated, therefore saving money by eliminating landfill and transport costs, giving way to quality compost and avoiding waste.²¹

Reduction of food waste by turning municipal market and supermarket chain leftovers into local solidarity resources in Barcelona, Spain.²²

In 2010, the need to find an outlet for surplus food from retail points of sale (hypermarkets, supermarkets, markets) was detected and gave way to a project with a double aim: preventing food waste in retail distribution and providing a response to the lack of food in Catalonia. The project focuses on the local distribution of surplus food, which is suitable for consumption but unsellable, from municipal markets and supermarket chain establishments. Bearing in mind that these leftovers are a product requiring almost immediate consumption, it is necessary to have a flexible, carefully designed logistics circuit to bring the leftovers as close as possible to the beneficiary and this is why they are collected directly by the nearest destination organisations approved by the Bank and distributed as fast as possible in order to provide them with fresh food. This project not only helps to tackle food waste but aligns this need with the social aim of fighting hunger as locally as possible.²³

Packaging waste:

Promoting tap water with water fountains in schools of Brussels, Belgium.²⁴

Following a call for waste prevention projects, the Brussels region of Belgium installed water fountains in school in order to reduce the consumption of single-use water bottles. This gave way to a 50% reduction of single-use water bottles. Because of this result, the Brussels institute for environmental monitoring launched in 2002 a campaign to install water fountains in all primary schools of Brussels. In two years, 180 water fountains have been installed in 121 schools and the reduction of single-use water bottles amounts to 43% of the waste collected in sample schools.²⁵

Promoting reusable bags with a tax on plastic bags in Ireland.²⁶

A significant change in consumers' behavior was witnessed in Ireland (where 1.2 billion plastic bags were used every year) after a tax was introduced on single-use plastic bags amounting to 0.15€ per bag in 2002. This gave way to an almost immediate reduction of 94% of the consumption of single-use plastic bags (going from 340 single-use plastic bags/inhabitants/year to 20 bags/inhabitant/year) which had a very positive impact on the cleanliness of public places. In addition, more than 96 million Euros were saved because this prevented the need to build another waste treatment facility.²⁷

²⁰ For more information : www.royalparks.org.uk.

²¹ ACR+ Report, 'Guide destiné aux autorités locales et régionales dans le cadre de la nouvelle directive cadre sur les déchets', November 2009 p. 50.

²² For more information: <http://www.bancdelsaliments.org/>.

²³ This project was selected as a candidate for the European Week of Waste Reduction Awards 2011. For more information: <http://www.ewwr.eu/awards>.

²⁴ For more information : www.bruxellesenvironnement.be

²⁵ ACR+ Report, 'Guide destiné aux autorités locales et régionales dans le cadre de la nouvelle directive cadre sur les déchets', November 2009 p. 63.

²⁶ For more information : www.environ.ie/en/Environment/Waste/PlasticBags ; www.gov.ie.

²⁷ ACR+ Report, 'Guide destiné aux autorités locales et régionales dans le cadre de la nouvelle directive cadre sur les déchets', November 2009 p. 65.

Bulky waste:

Furniture Re-use network, Bristol, United Kingdom

The Furniture Re-use Network (FRN) is an English organisation that supports, assists and develops charitable re-use organisations across the UK. They aim to reduce poverty by helping households in need access furniture, white goods and other household items at affordable prices. In addition, they support re-use organisations in providing training and work placement opportunities for people who are socially excluded. The sector is small but growing. It is able to reprocess electrical items in line with Waste Electrical & Electronic Equipment (WEEE) regulations and is developing partnerships with local authorities to collect bulky waste. FRN members reuse 2.6 million items of furniture and electrical equipment, divert 90,000 tonnes of waste from landfill and help around 750,000 low income households.²⁸ Such an organisation is a very good example on how to conciliate waste prevention with helping the community.

Hazardous waste:

In 2006, the city of Dublin released a guide on preventing hazardous waste at home²⁹. Hazardous waste prevention relies mainly on promoting products free of hazardous contents and providing testimony about their similar performances. When not possible to avoid hazardous products, the crucial point is to ensure a convenient collection system and regular awareness raising events (which may usefully be linked to door to door collection of hazardous material stored at home).

Construction & demolition waste:

When it comes to construction and demolition waste, most initiatives target recycling rather than prevention. Prevention strategies are based on avoiding over needed & hazardous material when building or refurbishing and reusing as possible demolition material for new construction. As absolute reduction of C&D waste may not be a relevant indicator – refurbishment, deep renovation or new construction could be environmentally & socially friendly good practices – it may be more useful to establish ratio comparing C&D waste produced versus number of building works declared.

Marine Litter actions:

International campaign on micro plastics by the North Sea Foundation.³⁰

The prevention of marine litter is another very important issue and among the actions taken in order to tackle it is the international campaign on micro plastics. Micro plastics are presents in scrubs, tooth paste, cosmetics, etc. and when flush away end up in our seas and oceans. After analysis, it was found that some day to day products contained more than 10% micro plastic. This could be avoided and alternatives are available. The North Sea Foundation, supported by other environmental NGOs, is asking for an EU ban on micro plastics in consumer products and is actively campaigning for the recognition of the dangers of micro plastics.³¹

²⁸ Furniture Re-use Network : <http://www.frn.org.uk/>.

²⁹ <http://www.dublincity.ie/WaterWasteEnvironment/Waste/RecyclingServices/Documents/Hazardous%20Waste%20Booklet.pdf>.

³⁰ North Sea Foundation website (in Dutch): <http://www.noordzee.nl/>.

³¹ Video demonstration (in Dutch): http://www.youtube.com/watch?v=8MOW_bNk3b4.

Conclusion and References



Conclusion

Conclusions to be emphasized:

- Waste prevention is a matter of obligations and opportunities;
- Waste prevention is at the crossroads of a waste stream, a population and a local situation regarding existing industry;
- Waste prevention programmes need monitoring, and this monitoring should be associated with a control plan;
- While indicators are not easy to develop, data gathering strategies should be investigated rather than using the lack of data as an excuse not to act;
- Examples of effective prevention measures exist and are already being implemented all around the European Union.

A key observation remains: levers for upfront prevention practices lay in product policy - such as longer lasting, more repairable products. Product policy is a matter of single market and EU competency. Therefore we should not neglect maintaining pressure at EU level. As product design will foster waste prevention, prevention actions and new business models for prevention would be easier to deploy at local level.



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