



While European law covers most areas of waste management there is a distinct and obvious gap when it comes to the biowaste sector. A Biowaste Directive would be an important tool if we want to promote consistent strategies for diversion of biowaste from landfills, argues Enzo Favoino of ISWA



The biowaste directive

At the core of sustainability... but at the borders of the political agenda

Over the last few decades, Europe has progressively established a consistent political and regulatory framework on waste management. The legislation is there to provide decision-makers with direction and targets, and this has led to the growth of a European waste industry which is ‘leading the way’ and setting the pace worldwide.

Here, we can mention a few directives that are regarded as the paradigms all over the world:

- The Waste Framework Directive (recently revised) – established the principles of the waste hierarchy: reduce, reuse, recycle – in order to minimize disposal. It also defined ‘material recovery targets’ to drive implementation of recycling strategies.
- The Packaging Directive – defined targets and therefore establishing drivers for the growth of the recycling industry.
- The Landfill Directive – enforces targeted reduction of biodegradable waste in landfills, and the obligation to pre-treat (which makes alternative methods more economically attractive than they are elsewhere across the world).

However, the general overview of policies reveals a missing piece of the puzzle – a comprehensive strategy on biowaste.

The Landfill Directive stipulates that landfilled biowaste should be progressively reduced. So we know that biowaste must not go to landfill, but we are not told which of the alternative options – from composting, anaerobic digestion, mechanical-biological treatment, incineration – we ought to use.

Local strategies and practice regarding treatment of biowaste need mutual consistency of plans, investments and operational

behaviour. The key point is, without a common EU perspective, choices are made by different authorities (central governments, local authorities, contractors, experts) who often go in different, or even opposite, directions. This is therefore not a safe environment for the private and the public sector to plan and deploy investments.

A Biowaste Directive was planned as early as 1999, and ever since has been at the core of the waste debate at EU level. After two drafts (issued in 1999 and 2000) a ‘working document’ was discussed in 2003. Albeit with differing goals, those documents investigated opportunities and the potential impact of a Directive. Then at a certain point, the issue was merged with the (then ongoing) definition of the soil strategy, which equally required an EU policy to promote recovery of clean organic sources included in biowaste. More recently, a Green Paper and an Extended Impact Assessment have been issued, and discussed among stakeholders.

In discussing the issue over time, the key players and associations in the waste sector have realised that their views regarding biowaste overlap to a remarkable extent. They have formed an organization called the ‘Biowaste Alliance’, which has produced a few position papers and statements calling on the EU Commission to continue with its plans for a Biowaste Directive.

According to their request, it is important that a Directive does not include only regulatory aspects such as conditions for compost application and so on, but also, and more importantly, ‘drivers’ and targets, similar to those included in the Packaging Directive, which will trigger and consolidate establishment of biowaste-specific initiatives and secure long-term safety of plans and investments by the public sector and the waste industry.



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An industrial compost site: long-term confidence in business plans such as this would be greater if there were a Biowaste Directive.



Small buckets and biodegradable bags are used for separate collection in south Europe.

It is therefore important for us to study the arguments for a directive made by the Biowaste Alliance, in order to have a clear picture of its importance, the way it should ideally be shaped, and its desired effects.

A win-win situation for the environment

Whilst a strategic Biowaste Directive would have clear benefits in the area of waste management, it also has a number of other cross-sectoral environmental benefits that are relevant to the discussion. A dedicated Biowaste Directive would provide Europe with an excellent opportunity to present holistic environmental thinking without neglecting economic conditions.

The sustainable management of biodegradable waste is a crucial component of the EU's sustainable resource management agenda, as described in the Environment Action Programme. A strategic Biowaste Directive, boosting the recovery of organic matter, has the potential to fulfil several objectives of this agenda, in that it will:

- help Member States fulfil the targets of the Landfill Directive and comply with recommendations of the Strategy on Waste Prevention and Recycling
- comply with recommendations of the Thematic Strategy on Soil Protection (promoting the use of quality composted products and defining uses for other biologically treated products to encourage sustainable soil organic matter management and to ensure the prevention of soil contamination)
- comply with recommendations of the Thematic Strategy on the Sustainable Use of Natural Resources (efficient use of resources, the need to deal with the declining quality of environmental media and to restore and develop the functioning of natural systems etc.)
- help achieve the goals of the European Climate Change Programme, when considering the role of solid organic matter acting as a carbon sink, along with other beneficial effects in terms of reduced energy input to agriculture (e.g. less production and use of mineral fertilisers, etc.).

These objectives are important in their own right; but there are no legally binding drivers to promote their fulfilment.

As well as environmental reasoning, there is also a clear economic rationale for implementing a Biowaste Directive. To

encourage the growth of the biowaste industry a better and more secure investment climate needs to be established.

What is at stake? The economics

The size of the biological treatment sector isn't in question – but the confidence of potential investors needs to be reinforced by clear policy on biowaste. This will give biowaste projects freedom from ever-changing local politics and sensitivities, putting initiatives into a common EU context that also takes into account recommendations for the recovery of organic matter coming from the Soil Strategy and the European Climate Change Programme, etc.

Long-term confidence of decision-makers and the industry is a primary concern when considering the viability of waste management strategies. Given the relatively long payback time, investing in treatment sites requires clear mid- and long-term perspectives. Also, long-term security of separate collection programmes is a pre-requisite for investments in collection equipment (e.g. types of receptacles, vehicles), which – for operational optimization and cost-effectiveness – need to be tailored to the type of material being collected.

Missing a common EU perspective, in many Member States, the difficulty of chasing moving targets and waste management strategies caused by rapid shifts in local policy has had a negative impact on the willingness to invest in new/innovative strategies and treatment facilities.

Providing a better investment climate is essential, since local initiatives for biowaste separation and quality composting rely on the co-operation and commitment of local authorities in countries where strategies for diversion of biodegradables have not been established (i.e. most Member States). A lack of confidence in long-term perspectives (the unwillingness to invest in collection infrastructure and treatment facilities without security of continuity in policy) may lead to a situation where the interest in biowaste treatment options among local authorities and waste management industry operators seldom match.

As it has been shown by the implementation of the Packaging and Packaging Waste Directive, setting targets is key to establishment of long-term confidence by decision-makers, waste planners and the recycling industry, since it establishes a common policy framework and objective, which enable them to work more effectively.



Relevance of critical mass

To ensure a successful biowaste strategy a 'Minimum Critical Mass' of biowaste at treatment sites is necessary to boost complementary activities. The need for an EU Directive promoting source separation is proven when one considers how the subsequent increase in material sent for composting would drive the establishment of important complementary tools.

Composting, as a recycling activity (unlike disposal which is not faced with marketing issues), needs complementary marketing tools to ensure full efficacy, e.g.

- Quality Assurance Systems (QASs) which have been shown to be key to growth of confidence among compost users;
- subsequent development of marketing strategies;
- consistent, quantitatively meaningful and steady supplies of composted products – a lack of which will negatively affect the interest by potential compost users (e.g. farmers), and hinder the development of a competitive compost market.

An overview of the current state of play among national composting strategies clearly demonstrates that well-developed composting systems have been completed (or are being completed), only in countries where drivers have been set (e.g. The Netherlands, Austria, Germany); others (e.g. Sweden, Italy and the UK) showing new developments, have recently established recycling and composting targets.

Optimization of separate collection

One major issue often addressed by decision makers when biowaste management is considered locally, is the viability and affordability of separate collection schemes. Separate collection is commonly considered to be a key instrument in securing good quality composted products, thereby fulfilling the principles of 'beneficial effects' and 'prevention of contamination' widely remarked by the Soil Strategy. Nevertheless, people tend to have an attitude which states 'separate collection is much more expensive'.

Actually, there is a wealth of evidence which shows separate collection schemes may be made cost-effective and concurrently give high-capture rates. Studies carried out across Europe show that operational optimization may allow authorities to run schemes with intensive separate collection at no incremental cost, when compared with schemes that do not sort biowaste out of MSW. Most of these innovative and cost-effective schemes have been implemented in the south of Europe, and then diffused elsewhere (e.g. the UK, some new Member States).

The fundamental point is: whilst the operational optimization needed for cost-effective systems is quite simple (e.g. having receptacles of the proper size, and using vans instead of packer trucks), it again calls for investment in equipment, which can only be cost-effective if a proper return and – again – a 'critical mass' of activities is ensured.

Summary

Having outlined the multi-faceted environmental and economic drivers for a strategic Biowaste Directive above, the Biowaste Alliance keeps calling on the EU Commission to prepare and propose a Directive that includes more than just technical requirements on product standards and process requirements.

A Directive is badly needed and such a Directive should include a strategic, long-term vision, designed to promote



Anaerobic digestion is increasingly considered, in combination with composting, as a way to couple efficient energy recovery and final production of soil improvers.

recovery of organic feedstocks for land application. We must have appropriate targets for recycling of biowaste at EU level. In this respect, the Alliance is aware that mandatory source separation would lack the flexibility needed to cover the wide range of social conditions, dwelling types, density of population, existing facilities and waste contracts etc., found across Europe.

In this respect the definition of quantitative targets for source separation and composting, also in combination with Anaerobic Digestion, is a suitable approach. Similar to the Packaging Directive, targets may define long-term framework conditions for development of strategies for sustainable management of biowaste, and set the scene for investment by the waste industry, while leaving the definition of Domestic Implementation Programmes up to Member States.

It is important to stress the higher 'viability' of targets compared to a general obligation towards source separation, given that:

- targets still leave a certain degree of freedom to waste planners to choose situations most suited for implementation of source separation;
- targets are 'result oriented' (e.g. have to deliver a certain amount/percentage of biowaste sent to recycling) whereas an obligation for source separation may also be fulfilled through poorly designed schemes, which would imply low participation/low captures and – as a general remark – would not deliver 'value for money'.

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References

For further information about the current state of the debate on a Biowaste Directive, the Extended Impact Assessment and the Biowaste Alliance, see *Barth, J.: Let's talk legislation, Waste Management World, Nov-Dec 2009*

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