



Dutch Waste Management Association •

Annual Review 2017

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Solutions needed across the whole value chain

There is a widespread conviction that to keep our world healthy and liveable we need a different approach to using raw materials and fuels. The signing of the Dutch National Agreement on the Circular Economy by a range of government, industry, research and other partners is an important next step. After all, if we want to achieve great things, we will definitely have to do it together. Building a circular economy requires a common focus and new business models.

To green the economy we need to find solutions across the whole value chain. Much to the satisfaction of the Dutch Waste Management Association (DWMA), there is now a growing realisation that high-quality recycling and reuse depends on having high-quality collected waste. We have been arguing this case for many years. Even more important is optimisation at the beginning of the value chain. Smart product design that facilitates materials reuse will raise closed loop recycling to the next level.

Different manufacturing concepts and alternative ways of using resources and materials also stimulate the transition to a low carbon economy. In the years to come the DWMA will intensify its

climate protection efforts. Our industry helps to reduce emissions across the whole value chain and is looking to play a part in implementing the Dutch Climate Agreement. We want to further increase our contribution towards meeting the climate targets by making greater use of carbon capture and reuse and by exploiting the huge potential within the sector for heat recovery.

There is also a significant transformation underway within the DWMA itself, but of a more personal nature. After more than ten years' service as our director, Dick Hoogendoorn is leaving us. Dick has been a master at stimulating cooperation and forging a common purpose within the Association. With his unifying personality he has positioned the DWMA as a solid and reliable negotiating partner. And he has laid the foundations for making the DWMA a partner in the circular economy. He passes the director's baton to Robbert Loos. I have every confidence that Robbert will be able to expand the DWMA's position in the circular economy and bring together the various parties in the materials value chain.

Boris van der Ham
President of the Dutch Waste Management Association



About this publication

The Annual Review 2017 looks back on some of the important developments during the year.

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Together **speeding** the transition to the **circular** **economy**

At the start of 2017, industry, trade unions, government, knowledge institutes and many others join forces to speed up the transition to a circular economy and sign the National Agreement on the Circular Economy (*Grondstoffenakkoord*). During the course of the year the Agreement is worked up in more detail in five transition agendas for Biomass & Food, Plastics, Manufacturing Industry, Construction Sector and Consumer Goods. The waste sector demonstrates its commitment and is closely involved in drawing up the agendas, which are published at the beginning of 2018.

Ideas for preparing the transition agendas are gathered at several national meetings with many stakeholders. The DWMA and its members take part in working groups on topics within each of the transition themes. The waste sector is happy with the process and with a number of the outcomes.

Sector positive about substance of the transition agendas

The transition agendas contain no concrete plans or verifiable objectives; they are about long-term visions with 'courses of action' for the next ten years. An important step forward is that the transition agendas put great store on quality

control of secondary raw materials. Consistent quality and security of supply are important elements in building a circular business case. The Transition Agenda for Plastics sets out a joint ambition to increase the use of renewable plastics and eventually bring the incineration of plastics to an end. For biodegradable plastics it has been agreed to investigate where these materials provide added value in a circular economy. The sector is delighted that the Transition Agenda for Biomass





& Food recognises compost as a sustainable soil conditioner. There is widespread agreement that suppliers of organic matter – such as compost – should be given a special status in fertiliser policy.

Press ahead with implementation

The transition agendas are just the start of the process. The DWMA feels it is crucial to press ahead quickly and regrets that the government is taking six months to decide on its position. It is impor-

tant that the government provides funding towards putting the plans into practice, but the DWMA has concerns about this. Moreover, the DWMA believes the plans should not be restricted to the Netherlands. Materials circular-

ity can be stimulated by national policy, but needs a European – and preferably global – perspective; neither must it stand in the way of a level European playing field. The European Union could also be a source of financial support.

See also:

- [First tools for the circular economy](#)

More information:

- [Transition agendas for a circular economy](#)



Sector **consolidates** contribution to climate protection

The circular economy is not just about a different approach to managing resources and materials, but also about creating a low carbon economy. The waste sector makes a contribution to avoiding emissions throughout the whole value chain by recovering and producing secondary raw materials and sustainable energy from waste.

The sector is making a contribution towards meeting national climate targets through carbon capture and reuse. Reusing carbon dioxide contributes to energy saving, recycling and greening the economy. Most of the CO₂ produced by the sector is of biogenic origin.

CO₂ to greenhouse horticulture

In 2017 the DWMA and LTO Glaskracht Nederland (a Dutch industry organisation for greenhouse horticulture) intensify their cooperation to explore options for supplying CO₂ to greenhouses

and improving and expanding the necessary infrastructure. The primary goal is to use the gas in the production of vegetables, cut flowers and plants in greenhouses. This will cut back on the consumption of natural gas and, if sufficient CO₂ is available, Dutch greenhouse horticulture can become entirely climate neutral. The waste sector can supply the 2 Mt CO₂ needed by the greenhouse horticulture industry. In the winter, when growers need less CO₂, the excess gas could be stored for use in the summer. To complete the business case, the sectors are calling upon the

national government to provide financial incentives to cover the irrecoverable development costs.

Huge potential

Waste sector has a huge CO₂ supply potential from waste-to-energy plants, biomass power plants, anaerobic digesters and sludge incinerators. Eventually a total of 4 Mt CO₂ per year can be captured. This useful resource can be used for many different purposes. Besides greenhouse horticulture, there is interest, among others, from the concrete manufacturing and chemical industries.



Measuring **actual recycling** lifts quality



In the EU policy process the DWMA lobbies hard for waste to be promoted as a raw material and for putting innovation and developing a market for secondary raw materials at the heart of policy. Transparency about the results achieved is particularly important. In 2017 the methodology for measuring recycling results is on the European agenda.

The EU legislature revises the waste legislation, including the Waste Framework Directive, and tightens the recycling targets for municipal waste. At the same time, the method for calculating recycling percentages is amended. The DWMA welcomes this because too often recycling performance is calculated from the amount of separately collected waste, despite the fact that some of this material is lost at every stage of the process.

Move the recycling measurement point

The DWMA argues that all the raw materials lost during sorting, cleaning and recycling should not be included in the recycling performance figures. How this

can be done depends on the type of waste stream. Little material is lost during the processing of glass, paper, and food and green waste, but the situation is different for wood and plastic. The DWMA calls for the measurement point for these two streams to be moved as far as possible towards the end of the recycling chain. For plastic, this would be the stage when the granulate is produced. For wood it should be where waste wood is delivered for reuse in the wood industry instead of where it is delivered for energy recovery.

Quality uplift in the recycling chain

Moving the measurement point further down the recycling chain will give a more accurate picture

of the efficiency of each stage and of the rate of material loss. It will provide an incentive to cut back losses as much as possible at each step in the chain, inviting the various parties to work together to make processes more efficient. The whole recycling chain will then be able to take a step up in quality. Moving the measurement point will, however, make it harder to achieve the recycling targets and so recycling performance figures will initially be lower. Nonetheless, high quality recycling always has the sector's highest priority, because markets can always be found for high quality secondary raw materials. Only this will bring about a circular economy.

See also:

- [Measuring actual recycling will boost quality](#)
- [Are the new European waste targets and measurement methodology realistic?](#)

More information:

- [Circular Economy Package](#)





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For years the DWMA has argued for putting quality before quantity in waste recycling. The collected material can then be recycled into high quality materials and reused in the manufacture of products. The DWMA is pleased that others are coming round to this view and that the call for putting quality at the heart of the recycling process is heard more often.

The DWMA supports the government's ambition of realising a circular economy by 2050. A circular economy requires markets for recycled products. Crucial for marketing are consistent quality, a competitive price and guaranteed volumes. Secondary raw materials must be able to compete with virgin materials.

Better quality needed

The sector is working hard to ensure recyclates, such as food and green waste, wood and WtE bottom ash (residual waste from waste-to-energy plants), are processed into high quality raw

materials. Plastic waste streams, though, present a considerable challenge, as underlined by the study of the plastic value chain by the Netherlands Bureau for Economic Policy Analysis (CPB) in 2017. The CPB concludes that there is too much emphasis on collecting as much as possible and too little on the quality of the collected plastic waste. The quality of the collected material has been the DWMA's yardstick for years. New collection and sorting techniques need to be found that can deliver materials at the quality demanded by the market. The DWMA and its members prefer a 'pull'

rather than a 'push' system and want to help manufacturers and municipal authorities to optimise the processes that will transform material chains and increase the use of secondary raw materials. Also, designers and manufacturers of packaging materials and other products should design more for recycling. But it is not only up to the waste industry and manufacturers to improve quality; the Dutch government can use sustainable procurement practices to give a substantial boost to the market for secondary raw materials.

More information:

- [CPB study of the plastic value chain](#)



Working for a sustainable energy economy





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To make the transition to a circular economy, we will have to use resources and materials differently and reduce and eventually minimise our dependence on fossil fuels. The production of sustainable energy by the waste sector helps that process along and contributes towards meeting climate targets.

Waste-to-energy plants generate electricity which is supplied to the national grid. Besides electricity they also supply heat and steam to factories, housing and greenhouses in the area. Anaerobic digestion plants, landfills, biomass power plants and sludge incinerators also produce sustainable energy. The sector currently provides a fifth of the sustainable energy produced in the Netherlands.

Capitalising on climate opportunities

Renewable energy currently makes up about six per cent of national energy use. Growing this to 14 per cent by 2023 will require major investments in energy saving and clean technologies as well as increasing renewable energy generation. To this end the government and industry have signed the Energy Agreement for Sustainable Growth (*Energieakkoord*). This will be replaced by the Climate Agreement (*Klimaatakkoord*), which is expected in summer 2018, and the waste sector is both able and willing to play its part in achieving the new objectives. Opportunities for the waste industry lie mainly in delivering heat and steam from the incineration of waste, sludge and biomass. CO₂ recovery and reuse, carbon sequestration and the production of green gas by the sector also contribute to meeting climate targets. The sector calls on the government to join with it in capitalising on these climate opportunities. Public authorities can help, for example by removing legislative and other barriers and introducing innovative ways to link heat supply with demand.

More information:

- [Government kicks off climate agreement efforts](#)



Cooperating on fire prevention

The sector's sustainability goals will only be achieved if employees can work safely and healthily. The DWMA takes its responsibilities seriously and maintains a focus on improving working conditions and safety among its members. One of the topics that has been high on the agenda for a long time and on which the joint membership has been working hard is preventing fires. This is reducing the number of accidents as well as lowering the environmental impacts and costs to society.

Stored waste is susceptible to heat generation and the concomitant fire risk. Spontaneous fires are most likely in summer and flammable materials in the waste, such as mattresses and lithium batteries, can increase the risk. Constant vigilance and rapid response are important in preventing fires and limiting their consequences.

Companies take effective measures

Fire prevention is high on the waste industry's agenda. Companies are investing in fire prevention and are taking preventive and organisational measures. They install sprinklers and fire extinguishers, store waste in separate compartments, maintain

limited stocks for short periods only and check consignments of waste when they are delivered. Other effective measures being taken are inspection rounds, special training courses for personnel and information for clients.

Members organise internal audits

A DWMA working group investigates the causes of accidents, the measures that can be taken and what companies can learn from each other about fire prevention. One of the results is a fact sheet describing measures for reducing fire risks. Another initiative is an internal fire safety study in which companies compare and contrast how they work. Members take a

critical look at each other's procedures and advise each other about what can be improved. Besides these internal audits, the annual



accident survey of DWMA members is expanded to include reporting on fires to provide more information about the causes of fires and how to best control and extinguish them.

Cooperation in the chain needed

To have the best chance of preventing fires, the waste industry needs the help of all parties in

the value chain. Suppliers must be alert to the fire safety aspects of the waste they deliver, and they are assisted in this by the waste sector. The companies inform their clients about what may and may not be included in specific waste streams and give feedback if they discover any unwanted material in the waste. The sector expects the government to ensure

a level playing field for fire safety by setting a clear regulatory framework backed by effective enforcement. The government can also make a difference by providing financial resources, for example to encourage mattress recycling. Separate collection and storage of mattresses will considerably reduce fire risks.



