

# A circular economy in the Netherlands by 2050

A summary of the commitment and priorities of the government of the Netherlands

## **Foreword**

As I write I find myself sitting at a desk made of plastic that was fished out of an Amsterdam canal. The carpet on which it sits is also recycled and together they look fantastic and are inspirational examples of the circular economy.

Between now and 2050, the world population will have grown to 10 billion people, all of whom will hope to enjoy increasing prosperity. However, this can only be achieved if we abandon our current practices for the production of food, energy and consumer goods and we curb the rate at which we consume raw materials.

As much as possible, we should be recycling materials and applying the principles of circularity for developing and producing new goods and services, right from the early design stage.

This is vital in order to protect the environment and the sustainability of our planet and for ensuring that raw materials remain available in the long term. It also opens up opportunities for the Dutch economy if we are amongst the first countries to embrace this fascinating development.

The government has been responding to this trend by setting up ambitious transition programmes for five major raw material chains: food and biomass; plastics; manufacturing; construction; and consumer goods. The government is now responding to the vast array of creative ideas and concrete proposals generated by initiating a raft of incentives and actions. Together this represents a promising step towards a fully circular economy by 2050.

Read all about it in this summary and think about what your role might be in this challenging and inspirational development, because now is the time to put words into action. I'm looking forward to the challenge!

Stientje van Veldhoven State Secretary for Infrastructure and Water Management



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## 1. Circular economy

### What is a circular economy?

A circular economy breaks with the standard pattern of extraction, production and waste. Instead, products and materials flow through a continuous, cyclical process whilst at the same time minimising raw material waste. This means:

- using and consuming fewer raw materials and resources (for example, preventing food waste)
- using other kinds of raw materials and resources (biomass and recycled plastics, metals and construction materials)
- using materials and products for longer (for example, through repair and servicing)
- using products more intensively (through platforms for sharing, exchange, borrowing and lending)

### Why is this important?

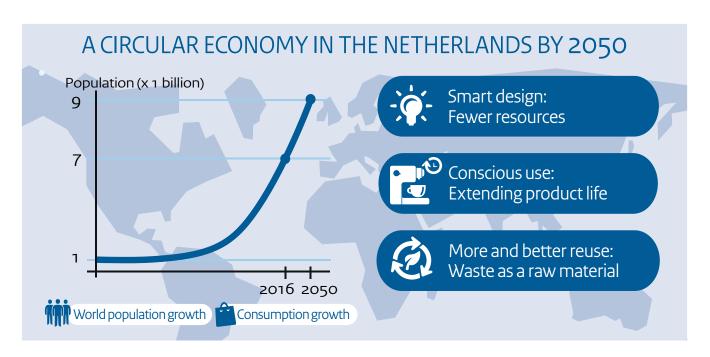
A circular economy can help solve many problems. By reducing the demand for and the consumption of raw materials, for example, we can limit carbon emissions, soil degradation and the release of (micro)plastics into the environment. If we do this, the Netherlands can attain a quarter of the climate objectives it is currently committed to. In the energy transition, critical materials for solar panels, batteries and wind turbines can remain available through recycling. In agriculture, sustainably produced biomass will ensure that we can feed more mouths without putting increased pressure on the environment.

At the same time, the circular economy will create opportunities for boosting the earning capacity of the Dutch economy and raising (net) employment, both at the top-end of the labour market, and for people with a disadvantage on the labour market. Additionally, the circular economy will make a significant contribution to the development goals of the United Nations, not only in the Netherlands, but in the rest of the world too.

### Who will be responsible for what?

The transition to a circular economy is still in its infancy. The Netherlands already has a good track record in recycling, design-for-recycling and product-as-a-service. A major challenge on the road to a circular economy will be bringing together the right partners. Businesses which hitherto had nothing in common, will soon become each other's raw material suppliers. Examples are water companies that extract phosphate from wastewater for the benefit of industry, discarded fishing nets that serve as carpet tiles, and lamps which remain the property of the supplier but where the consumer pays solely for the amount of light used.

This transition will have an impact on the roles of many, from financiers and buyers to teachers and employers. It poses questions too on the government as to how the development of a circular economy can best be supported and expedited.



The government sees the Netherlands as a prominent international player and aims to encourage the design of products in such a way that they can be easily repaired, reused and recycled. This affects everyone:

- manufacturers and public authorities must undertake joint steps to bring about material cycles and learn how they can best do this
- employees, on the basis of their own expertise, must also do
  their bit in facilitating the transition of their business. The
  transition also requires retraining programmes for current
  professional practice so that no one loses out on an individual
  level
- public authorities have a role to play as policymakers, connectors, information providers, market players and launching customers
- consumers must be prepared to give their products a new or longer lease of life by shifting from ownership to use, and to responsible decision-making
- in education and science, the circular economy must, as much as possible, become part of curricula and research studies

The so-called frontrunners - public authorities, the business community, trade unions, nature conservation and environmental organisations, knowledge and educational institutes, financing bodies and over 350 other signatories - have kick-started the process with a *Grondstoffenakkoord* (National Agreement on the Circular Economy). National government sees it as its task to stimulate this process.

This publication provides a more concise and more accessible summary of the main points of a letter to parliament presented to the Dutch parliament on 29 June 2018 on the Circular Economy. Agendas have been formulated for five key raw material chains to make this shift towards circularity: biomass and food (1); plastics (2); manufacturing (3); construction (4); and consumer goods (5). Chapter 2 presents the main insights into these raw material chains and explains how the government is responding to these. In addition, the government will be implementing general measures to further the circular economy. These are described in chapter 3.

### **Finally**

In order to put words into action, the efforts of everyone are needed. Would you like to know more, keep track of developments, or play an active role yourself in the transition to a circular economy? If so, check out the following:

www.circulaireeconomienederland.nl www.circulairondernemen.nl

## 2. Five key raw material chains



## 2.1. Biomass & Food

Tackling climate change means using fewer fossil fuels. At the same time however, a growing global population is demanding increased food production. With respect to both, biomass can provide a good alternative if this is produced in a circular manner.

- Optimum use of biomass | The government is stimulating optimum use of biomass and waste flows from the agriculture, horticulture and forestry sectors. If biomass is supplied from developing countries, this is done with social and environmental sensitivities in mind.
  - o The government is committed to the sustainable purchasing of biobased products, in particular when it comes to materials for the catering and construction industries. For example, for bioplastics and biobased construction materials, a review of the current state of knowledge will be drawn up this year. Recommendations will be made as to whether setting up platforms for bioplastics and for construction with timber would aid this process
  - The Netherlands is already firmly committed to amending and clarifying European regulations with respect to the use of vegetable waste flows and former foodstuffs in animal feed. The government is likewise committed to relaxing the ban on animal meal

- Circular and regenerative use of soil and nutrients | For ecologically sustainable farming and food production, it's essential to use nutrients more effectively, to minimise soil, water and air depletion, and to reclaim nutrients from food leftovers, manure, wastewater and other organic waste. This means that the Netherlands will also be less reliant on the import of raw materials for animal feed and artificial fertiliser. In the European context, the Netherlands is endeavouring to create a stable and sustainable market for the trade and use of such reclaimed products. The following will be examined:
  - a clear, practicable set of indicators and instruments to make soil and water quality (chemical, physical and biological) transparent and quantifiable for consumers.
     Not only to bring about improved soil quality, but also for increased (stability of) production and fewer undesirable emissions into the environment
  - o precision agriculture, smarter use of machines, and new strains, cultivation systems and livestock housing systems which result in a larger share of organic matter in manure. In 2018, the government is making €6 million available for research into innovation and agreements with private sector partners and the community to encourage sustainable soil management



- More vegetable protein | The production of animal protein is a cause of significant emissions of greenhouse gases such as CO2, methane and nitrous oxide. It also has a negative impact in the form of nitrates in groundwater and ammonia in the environment. Food must continue to be sustainable, healthy, safe and affordable. That means that we have to find the right balance between animal and vegetable proteins.
  - o The government is consolidating the position of the Netherlands as frontrunner in terms of protein sustainability, with an investment of €1.75 million annually. Amongst other things, new research will be carried out into how to bring about changes in our eating habits
- Reducing food waste | Less food waste means less pressure on the environment and more efficient use of available biomass.
   Over the period 2018-2021, the government will be investing €7 million in innovation, research, monitoring and public information in this area.

- Increasing the supply of sustainably produced biomass | The government:
  - o will be making €1.5 million available this year for measures to combat deforestation in new and existing forests, and to develop a circular timber chain
  - o is investing €5 million in increasing sustainable seaweed production
  - is implementing a sustainability framework for all forms of biomass
- Feeding and greening the cities | Feeding the population of cities is becoming an increasing challenge. The aim is to develop and validate systems which enable this goal to be achieved sustainably and which at the same time lead to better and socially and ecologically sound earning models. The government wishes to pioneer the development of knowledge and innovation to bring about a self-sustaining city with a circular food supply.



## 2.2. Plastics

When it comes to plastics and the transition to a circular economy, prevention comes first and foremost. This will necessitate boosting the demand for recycled and renewable plastics. And there must be more transparency with respect to biodegradable plastic. Moreover, the government wishes to do its bit in tackling the problem of plastic worldwide, such as the serious contamination of the oceans.

- Prevention | Some materials provide no sustainable contribution to the economy, whilst at the same time forming a threat to human and animal life.
  - the government supports the European Commission in its campaign against microplastics
  - in addition, efforts are being made to reduce unnecessary use of plastics. The packaging, construction, automotive and consumer electronics industries are being challenged to come up with concrete improvements
  - after previous successes in the cosmetics industry, the government has now started to tackle the biggest sources of microplastics in the Netherlands: litter and car tyres. For other sources, such as apparel and paint, the business

- community is being challenged to come forward with innovative solutions
- The market is demanding quality | In order to close the plastics cycle, the market needs recycled and renewable plastics of an acceptable quality.
  - To deliver the desired quality, the waste and recycling industry will have to innovate its current collection, sorting and recycling systems. The parties involved should start to see themselves as 'raw materials brokers'
  - o recycling cuts carbon emissions significantly. The government is therefore looking into the possibilities of banning the incineration of recyclable waste from 2030 onwards. In the run-up to this, there's being looked into raising waste disposal charges for dumping and incinerating recyclable waste
  - the development of chemical recycling as an alternative route for processing is being stimulated with a €5 million investment
- Biodegradable plastics | Agreements are being reached with the bioplastics industry, recycling and compost businesses and consumers as to which degradable products and materials have an added value and can therefore continue to be permissible.



- International efforts | Opportunities exist for encouraging persons, businesses and organisations at an international level to come up with concrete, and inspirational, projects:
  - together with the Indonesian authorities, the World Wildlife Fund and companies such as Unilever, FrieslandCampina, Danone and Indofood, the Dutch government is investigating alternative solutions for small plastic packaging
  - an ambition to realise more international chain projects and to widen the scope of existing initiatives
  - together with other like-minded countries and as part of a UN initiative, the Netherlands is making efforts to improve the international framework for tackling plastic litter and microplastics both in the sea and at the source

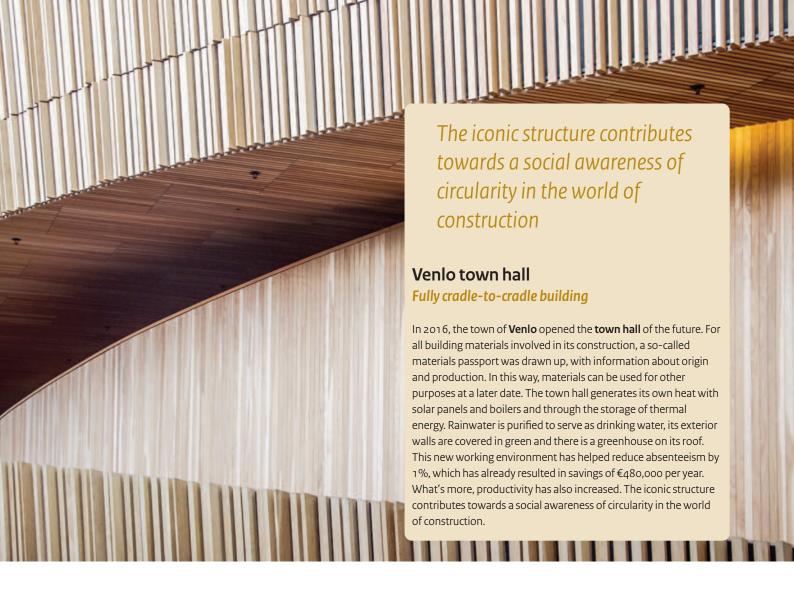


## 2.3. Manufacturing

Circular initiatives in the manufacturing industry can lead directly to fewer carbon emissions. They help towards bringing about circularity in the use of rare metals in wind turbines, solar cells and batteries. Here are chances for further improving the competitive advantage and the earning capacity of the Netherlands.

- Preventing net outflow of metals | This starts with the closing of the Dutch recycling circle, from production to re-use and recycling:
  - o the recently launched *Grondstoffenscanner* (Raw Materials Scanner) will be expanded. This will enable companies to pinpoint exactly where the materials they use come from, what the associated risks are, and what actions can be taken to diminish these risks
  - o a Kennisplein Grondstoffen (knowledge centre for raw materials) is being set up where businesses can go with questions arising from the Grondstoffenscanner results
- Replacing substances of concern | The government is working towards the development of a method to assess on a case-bycase basis whether substances of very high concern can best be recycled, incinerated or dumped in order to minimise the impact on humans and the environment. During the product

- design phase, the business community itself already needs to seek out satisfactory replacement materials.
- Facilitation | The government plans to stimulate circularity of the manufacturing industry in the areas of knowledge and innovation, purchasing and regulations and grants. This will be facilitated by:
  - the inclusion of the concept of circularity within the manufacturing industry in education
  - the materials passport and the development of a centralised database of design criteria, functional units and substitutes per material
  - o testing grounds for, for example, urban mining
- Learning | By launching concrete initiatives with the business community and knowledge-based institutions, the government will be able to identify measures that help bring about circularity in the manufacturing industry.



## 2.4. Construction

Smart recycling of materials in the construction industry not only means cost savings, but it will also kick-start demand for new products and services. A new form of knowledge development will come about and enable the construction industry to showcase itself as an attractive, innovative employer.

- Role model | As major infrastructure commissioning authorities, the Rijksvastgoedbedrijf (Central Government Real Estate Agency), Rijkswaterstaat (Public Works and Water Management) and ProRail will actively use their purchasing power to facilitate market introduction and upscaling of circular innovations. Over the coming years, they will work towards the development and acceleration of knowledge and instrument generation so that their management and their assignments can indeed be made circular.
- Clearly defined methodology In order to stimulate market development, the valuation of circular measures will be included in the environmental performance requirements of the *Bouwbesluit* (Dutch Building Decree). Consultation with the market during the current parliamentary term will determine at which point this can be intensified.
- Materials passport | Market players will develop systems with include information on all the materials which have been incorporated into a building or infrastructure project. This will support owners in maintenance and repair activities and will also give an indication of which materials will become available for recycling at the end of a building's operational lifetime. Within two years, a decision will be taken about the situations in which this so-called materials passport will become compulsory by law.
- Construction targets | The government is urging the
  construction industry to take advantage of the opportunities
  offered by circularity as part of its own ambition to build
  around 1 million dwellings by 2030 and to move 30,000 to
  50,000 existing dwellings per year from natural gas to more
  energy-efficient modes of power supply.



## 2.5. Consumer goods

Efforts must be made to maximise the operational life and recyclability of raw materials for those products with a short lifespan, such as disposable items and packaging, as well as those with a longer lifespan, such as household appliances and furniture.

- Focus and coherence in policy | The government is challenging manufacturers of furniture, textiles, household appliances and disposable products / packaging to innovate and to effectuate less (non-recyclable) waste. Smarter return systems must be developed to make it as easy as possible for consumers.
- Production phase | In a European-wide context, the
  government has set itself the task of drawing up a framework
  for reparability, longer even lifelong warranty schemes and
  the introduction of labels with information about the lifespan
  and use of raw materials of products. Much is expected of
  circular business and earnings models where payment is made,
  not for possession, but for use, or with a buy-back guarantee.
  - o for banks and investors, these new earnings models require a different kind of risk assessment and a change in accounting regulations
  - o to further knowledge exchange, the government is

- facilitating the start-up phase of the 'product-as-service' project. To this end, owners of (holiday) rentals and distributors of household appliances will stimulate the application of new earnings models
- **Ultilisation phase** | The grouping of recycling stores and 'repair cafés' in so-called circular 'craft' centres will make it simpler and more attractive to offer 'waste' products for re-use, repair, a facelift, sharing or recycling. Moreover, it will create new employment opportunities, also for more disadvantaged jobseekers on the labour market:
  - the government urges frontrunners in the public and private sector to come up with an integrated plan for these craft centres in all regions
  - in consultation with the retail trade, measures will be taken
    to facilitate and stimulate consumers to adopt a more
    circular behaviour. For example, packaging-free products in
    supermarkets, separate rates for different types of packaging
    materials and special pricing for one-off use of reusable
    coffee cups
  - as an extension of the Green Deal Afvalvrije Festivals (Green Deal Waste-free Festivals), clear-cut agreements will be made with the events and hospitality industry to minimise the use of disposable products



On average, users save 91 kilowatt hours, 10 litres of washing detergent and 3,000 litres of water per year. This is the equivalent of what 12,000 trees absorb in CO2 emissions

## **Bundles**

Paying per wash load

Through startup **Bundles** you can rent a Miele washing machine and then pay for each load you use. The appliance is connected to the internet and calculates the best ratio of washing detergent to water for the load in question. At the same time, users are given tips via a designated 'Laundry' app. In this way, users are able to save an average of 91 kilowatt hours, 10 litres of washing detergent and 3,000 litres [of water] per year. In carbon emissions saved, that's the equivalent of what 12,000 trees absorb. Furthermore, this provides Miele - a company which now produces environmentally friendly washing machines and driers with the incentive to increase the operational life of their appliances instead of aiming for frequent replacement. They are helped in this by user data made available by Bundles.

- Waste and recycling phase | The circular economy needs the
  best possible infrastructure for collection, sorting and
  recycling, so that discarded products and materials can be
  returned to the chain. With businesses, offices, shops,
  schools and sports clubs, the government is to develop a
  coherent plan for improvements.
  - the government wants more and better recycling so that fewer waste material is dumped or incinerated
  - for waste that is not easily recyclable, chemical recycling will help reduce carbon-based constituents (food and garden waste, plastic, rubber, textiles, paper, cardboard and wood) to their basic chemical form, from which new materials can be made, such as plastics

## A circular economy in the Netherlands by 2050

Schematic overview of the commitment and priorities of the government of the Netherlands

- Production
- European development of circular business models
- New risk assessment for banks and investors
- Product-as-a-service project
- Utilisation
- o Circular craft centres and repair cafés
- Stimulate consumers to adopt a more circular behaviour
- Minimise the use of disposable products in the events and hospitality industry
- Recycling
- More and better recycling
- Chemical recycling
- Innovation
- Less (non-recyclable) waste
- Development of smarter return systems





- Role model
- Major government purchasers use purchasing power to promote circularity
- Clearly defined methodology
- Circular measures in 'Bouwbesluit' (Dutch Building Decree)
- Information
  - Materials passport
- Construction targets
  - Circular construction and adjustments of dwellings

Manufacturing



- Preventing net outflow of metals
- Expansion of 'Grondstoffenscanner' (Raw Materials Scanner)
- Knowledge centre 'Kennisplein Grondstoffen'
- Replacing substances of concern
- Development of a method to minimise risks
- · Stimulate circularity of the manufacturing
  - Education
  - Materials passport
- Testing grounds
- Learning
- Launching concrete initiatives

- Optimum use of biomass
- Sustainable purchasing
- European regulations
- Soil and nutrients
- o Transparent and quantifiable soil and water quality
- Sustainable soil management
- More vegetable protein
- Protein sustainability
- Reducing food waste
- o Innovation, research, monitoring and public information
- Sustainably produced biomass
- o Circular timber chain
- Sustainable seaweed production
- Sustainability framework
- Feeding and greening the cities
- Self-sustaining city with a circular food supply

## Food and biomass



## **Plastics**



- Prevention
- Support EU campaign against microplastics
- Reduce unnecessary use
- Tackle biggest sources: litter and car tyres
- Quality
- Innovation of recycling systems
- Banning the incineration of recyclable waste
- Stimulate chemical recycling
- Biodegradable plastics
- Agreements on degradable products and materials
- International efforts
- Alternatives for plastic packaging
- International projects and initiatives
- UN initiative against microplastics in the sea

## 3. What else is the government doing?

Apart from the actions that have already been described within the five key raw material chains, the government will be introducing an additional set of measures and initiatives to speed up the transition to a circular economy. This is to raise awareness not only amongst manufacturers of their own responsibilities, but also to urge consumers to adopt more sustainable behaviour. These efforts can be broken down in ten lines of action.

## Producer responsibility

Manufacturer responsibility forms an important stimulus with regards to (innovation in) the collection and recycling of discarded products. It can also act as an incentive to circular design, prevention of material use, and high-quality re-use and recycling. Producer responsibility is already in place for end-of-life vehicles, car tyres, electrical appliances, packaging, batteries, paper and cardboard, and plate glass. The government wishes to extend this to other product groups:

- following investigations it is assumed that manufacturers in the furniture and textile sectors will be introducing a similar system on a voluntary basis. If no results are forthcoming by mid-2019, this will be made mandatory
- the government is making deals with major catering chains about reducing the number of disposable coffee cups. This follows on from the successes of the so-called green deal: an agreement reached to limit waste flows at festivals
- at least for curtain walls on buildings, but also for solar panels, heat pumps and other products used towards energy transition, the possibilities for introducing producer responsibility are being explored. For existing products, such as batteries, the possibilities of extending schemes are being looked at (e-bike batteries for example)
- the Netherlands is making a contribution to working out tariff differentials which will help encourage waste prevention, circular design, recycling, repair and restoration of products in a EU context

## 3.2. Stimulative regulations

Businesses which have already adopted circular practices are often helped by removing barriers. Where required, legislation which removes hazardous materials from the cycle will be strengthened. The business community will be invited to develop its own forms of standardisation and certification alongside the statutory measures:

- the employer's federation (VNO-NCW) and umbrella organisations representing local, provincial and water authorities - on the basis of their practical experience - will be advising central government regarding the difficulties and obstacles presented by regulations and problems in their execution (licensing, oversight and monitoring). The government will be an active participant in this process
- the Netherlands is firmly committed to creating transparency for businesses when it comes to the waste status of secondary raw materials, likewise in the European context
- where regulations stand in the way of innovation, businesses
  can call upon the Ruimte in Regels scheme, which seeks out
  flexibility in the interpretation of regulations. Likewise the
  dialogue on enforcement between policy, inspection and
  businesses will be continued
- the Netherlands is working closely with the United Kingdom,
   Flanders and France at removing barriers to international trade
   and transportation of secondary raw materials
- the government is committed to eco-innovations in the EU.
   The aim of this together with other member states is to make regulations more transparent, to exchange examples of best practices, and to make recommendations for governance

Kajsa Ollongren, Minister of the Interior and Kingdom Relations: "As a major consumer, the state has, by way of example, a big role to play in making circular purchasing the norm. What's more, we have to encourage others to do the same."

## 3.3. Circular design

To ensure the future of the circular economy it is vital that products and the services and business models associated with it are developed with a circular perspective in mind. As part of the CIRCO programme of the *Topsector Creatieve Industrie* (CLICK-NL), businesses and designers are collaborating on safe-by-design product development (without harmful substances). The government has the ambition to make great strides over the next four years to ensure circularity in design becomes the new normal.

- the support now being offered to companies adopting the CIRCO method is being extended, to ensure that around 10% (4,000) of all manufacturing companies in the Netherlands has taken steps towards effectuating circularity by the end of 2022
- at an international level, the government is aiming to embed circular design in business and education

## 3.4. Circular purchasing

The government is urging all public and private sector organisations to implement circular purchasing practices, so that 1 megaton of carbon emissions can be saved during its current term of office. A few of the measures implemented are:

- €5 million will be made available this year for a hundred pilot projects with respect to circular purchasing. This will make know-how and expertise available and measure the effects of this. Lessons learned will be shared through PIANOO, a centre of expertise in the field of purchasing and tendering
- an assessment will be made as to whether carbon emissions, as a criteria for selecting preferred suppliers, is an effective instrument in reducing emissions
- various instruments have been and are being developed to help businesses and statutory authorities to implement circular purchasing. This includes a new ISO 20400 standard, a webtool which makes criteria documents for purchasers easier to understand and provides a self-evaluation tool to help gain better control of a socially responsible purchasing policy. The Circulair Inkopen Academie (CIA) will this year be setting up a third round
- the Green Deal Circular Purchasing programme will be continued and has, with Dutch support, now been extended to various other European countries
- in both a European and a UN context, the government is also promoting circular purchasing in other countries, amongst other things, by exchanging best practices and helping to develop tools and circular criteria
- for central government, an action plan has been set up with the
  goal of making 6 of the 31 generic purchasing categories circular
  by 2020: office furniture; workwear; paper and printed materials;
  ICT hardware; catering; and waste and raw materials
  management. This must be increased to 10 categories by 2022

- the health care sector, with a purchasing power of around
   € 21 billion, is currently planning on setting up a green deal
- because it acts as a role model, the sports industry has entered into agreements about the reuse of materials in the construction of sports facilities, waste separation and other steps towards circularity

### 3.5. Market incentives

The processing of environmental impact into the pricing of products and subsidisation of renewable raw and secondary materials, may provide incentives for improving the environment and promoting recycling. With this in mind:

- an ambitious green tax package has been specified in the
  coalition agreement. Increased waste disposal charges with a
  wider remit and the introduction of a minimum-rate CO2
  charge for electricity production will stimulate the circular
  economy. Dispensation for sewage sludge and waste that is
  incinerated by biomass power plants is to be abolished. This
  means less waste will be dumped, incinerated and exported,
  and the option of sorting and recycling will become more
  attractive
- the Centraal Planbureau (the Netherlands Bureau for Economic Policy Analysis, CPB), is to carry out further research into the pricing of environmental impact and the stimulation of demand for secondary materials
- the government is to explore the possibility of banning the incineration of recyclable waste from 2030 onwards and examine whether the waste disposal tax can help encourage recycling in the run-up to this
- the government has asked the Planbureau voor de Leefomgeving (the Netherlands Environmental Assessment Agency, PBL), to explore the possibilities of European-wide cooperation with respect to more effective measures

Ank Bijleveld, Minister of Defence:
"Our uniforms are made from recycled material, a fantastic example of circularity which we hope inspires other public authorities."

## **Financing instruments**

Circular business models often prove difficult to finance. For example because profits for products provided as a service only gain momentum at a later stage. The government is collaborating with businesses and banks to seek financing for circular business cases and innovation. Therefore:

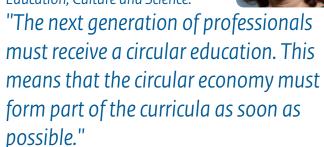
- businesses can receive support from the Rijksdienst voor Ondernemend Nederland (Netherlands Enterprise Agency) or from the Nederlands Investerings Agentschap (Netherlands Investment Agency, NIA)
- through the auspices of Invest-NL, to be set up by the central
  government, it aims to contribute to the activities of Dutch
  businesses at home and abroad in order to strengthen social
  goals, such as the circular economy, by providing venture
  capital. The European Investment Bank and the NIA will be
  looking at ways of developing an investment platform for the
  circular economy
- the government can contribute to the upscaling of circular concepts which lead to cost-effective savings in CO2. This does not extend to structural operating grants however

## 3.7. Monitoring, knowledge and innovation

Many questions still have to be answered in respect of the circular economy, both in terms of the content of the transition, as well as the process leading up to it:

- to make the transition to the circular economy a success, the PBL is expanding its monitoring to a measurement and control system
- as part of its route towards a circular economy in the Nationale Wetenschapsagenda (National Research Agenda, NWA), a programme that has been initiated to develop and implement research projects for the built environment and the subject of plastics
- this year, the government will be making around €6.5 million available to enhance the level of expertise at Dutch knowledgebased institutes and to boost innovation
- in the Chemicals industry (a so-called top-sector), work is being carried out to develop and introduce chemical recycling and new sustainable materials. In the Creative industry (also a topsector), businesses and designers are collaborating on concrete circular business cases and sharing their experiences, knowhow and inspiration within a wide network
- for sharing know-how, a number of knowledge networks and platforms, such as Nederland Circulair!, Holland Circular Hotspot, the national knowledge network Biobased Economy and the Groen Kennisnet already exist. Use is also being made of international platforms which bring together relevant know-how on policy, innovations and practical examples

Ingrid van Engelshoven, Minister for Education, Culture and Science:



## Public communication and embedding in education The government will enable consumers to make a conscious

choice via public communication and concrete product information:

- raising awareness and public support are preconditions for the transition to a circular economy and the behavioural changes this necessitates For that reason, the government is committed to creating a community-wide ownership amongst citizens, businesses, public authorities and other organisations
- the government is to develop a campaign for a circular economy, energy and climate. Initially this will focus on widening public support and is geared towards making the transition meaningful for citizens. Following this, there will be secondary campaigns on themes such as waste separation, 'natural gas-free' living, mobility, food, clothing and textiles
- within a year, the government will have drawn up a concrete plan with respect to consumer behaviour and retail, to address the problem of waste from the consumer perspective, and to provide consumers with the information they need to make informed choices
- given the importance of practical examples, experiments in circularity will take place at festivals and events in the form of 'living labs'

The government firmly believes that attention should be given to the circular economy in education. For primary and secondary education, the curriculum is already being subjected to a major overhaul, in which sustainability is also included. For vocational education, the government has invited the *Samenwerkingsorganisatie Beroepsonderwijs Bedrijfsleven* (Cooperation Organisation for Vocational Education, Training and the Labour Market, SBB) to include the circular economy in its study requirements and curricula. For higher education, the government is to consult with the respective umbrella organisations representing the universities of applied science (*hogescholen*) and the research universities (*universiteiten*).

 in order to tie in education with the labour market, the socalled Techniekpact and regional establishments for employment mediation will be consulted

- joint efforts will be made by the government, partners in education and the business community, to stimulate innovation in education, focusing on sustainability of food and the environment. Circularity provides an important starting point in this
- the Creative industry programme Kennis Innovatie Mapping
   (Knowledge Innovation Mapping, KIEM) for circular economy
   projects will be continued, so that universities of applied
   science and businesses can continue to carry out (applied)
   research into circular products, design technologies and
   production methods

## 3.9. International efforts

Dutch businesses frequently operate beyond national boundaries and many raw material chains and waste flows are internationally organised. The legal and economic preconditions that apply to the Netherlands, are largely determined at a European level. For that reason, the government is committed to consolidating political support for the circular economy internationally and for maximisation of opportunities available to innovative Dutch companies. This will be with Schiphol as a circular hot spot and Rotterdam as the biobased mainport for Europe.

- the government is focusing on the exchange of best practices
  and is committed to strengthening the conditions for a circular
  economy in international treaties, programmes and directives.
  In doing so, priority will be given to tackling waste flows of
  plastics, e-waste and textiles, whilst at the same time
  stimulating the biobased economy and encouraging circular
  purchasing
- the government is to expand and consolidate the Holland Circular Hotspot platform in order to help businesses share their knowledge, organise trade missions and learn from experiences abroad
- with respect to developing countries, the government is stimulating the Dutch private sector and local businesses to implement innovation programmes. In order to prevent any negative effects, the government is to investigate the possible impact of the circular economy on developing countries
- the government is working with UN Environment towards more sustainable waste management in the Caribbean. This will deliver opportunities for improving waste policy, speed up recycling policy and mark the first steps towards circularity in other parts of the Kingdom

Carola Schouten, Minister of Agriculture, Nature and Food Quality:



"Combating food waste is essential to a healthy, sustainable, circular future."

## 3.10. Versnellingshuis

The government, together with the business community, social organisations and public authorities, is to set up a so-called *Versnellingshuis* (fast-track point):

- this involves providing targeted support for regional circular initiatives and flagship projects. This will be done by matching supply and demand, by disseminating knowledge and best practices and by providing support to pioneers in SMB
- available know-how and support from the Netherlands
   Enterprise Agency, Rijkswaterstaat, the Ruimte in Regels programme
   and inspectorates such as the Inspectie Leefomgeving en Transport
   (Human Environment and Transport Inspectorate), will quickly
   be made accessible
- meanwhile, the job of building on Nederland Circulair! and CIRCO continues apace

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