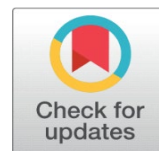


# FROM LINEAR TO CIRCULAR ECONOMY: THE ROLE OF REGIONAL AWARENESS AND INITIATIVES



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## ABSTRACT

Although many OECD countries are working on it, the economy is only slowly developing from linear to circular. However, many economists are convinced that this is the only viable path if we want to prevent a climate catastrophe by 2050 and thereby leave a habitable and developable world for the next generations. Numerous articles in the press point out that many companies are only at the beginning of a gigantic effort to make their production CO2 neutral but also sustainable and that a lot of innovation will be needed before that happens. So, what are the reasons why the transition towards a circular economy is so difficult to make?

The European Academy of the Regions, that advocates the regionalisation of a number of economic and socio-cultural sectors, closely follows the development of the circular economy. Since the beginning of May 2021, it has therefore set-up a blog in which newspaper articles are translated from various countries to English with examples of successful circular economy initiatives or of critical studies: [earaercircular.tumblr.com](http://earaercircular.tumblr.com). To date, the organisation made a statistical study on the 100 selected articles <sup>1</sup> published between 3/5/2021 and 3/9/2021 that will give the reader an idea of the themes that are most frequently discussed and of the remedies that are created. The articles come from newspapers and magazines from Belgium (Dutch and French), the Netherlands, Germany, Spain and the US and to a lesser extent from Switzerland, Canada and France. The results of this research are an overview of the topics covered, of indications of how initiatives are created, who is the influencer as well as an overview of the articles that have received more than 100 clicks on social media.

It has been striking that many of the initiatives described by the press have arisen from companies whose top management is aware of the bend that urgently needs to be made and who also see commercial opportunities to start early. There are also a number of cooperative initiatives, that still succeed in creating successful initiatives from a small-scale approach. A second important player in this conversion is the academic world, especially faculties or even entire universities that have been conducting research into new materials or new applications for a long time. The traditional third player are the authorities, but very often regional governments or large cities.

The conclusion remarks show that circular economy can only be successful if companies see a profit model in it, or are forced to change their course by public opinion because of negative perception and that we are not yet there.

**Keywords:** Linear, Circular, Economy, Awareness, Initiatives

## 1. INTRODUCTION

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Although many OECD countries are working on it, the economy is only slowly developing from linear to circular. However, many economists are convinced that this is the only viable path if we want to prevent a climate catastrophe by 2050

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and thereby leave a habitable and developable world for the next generations. Numerous articles in the press point out that many companies are only at the beginning of a gigantic effort to make their production CO<sub>2</sub> neutral but also sustainable and that a lot of innovation will be needed before that happens. So, what are the reasons why the transition towards a circular economy is so difficult to make? This article attempts to provide an overview of the causes.

## 2. THE 3 R'S

Not every country is as far along when it comes to introducing a circular economy. Prof. dr. Herminio Sastre, director of the Chair of Circular Economy at the University of Oviedo (Spain) and professor of Environmental Technology, sums up the three principles again in an article published this year in *El País*: Reducir, Reutilizar y Reciclar <sup>2</sup> or **Reduce, Reuse and Recycle**.

And although the same professor points out in the same article that this is a principle already successfully used by our grandparents to minimize the waste they produced, there are big differences between the period of those grandparents and the present one. Our grandparents lived close to the land on which food was harvested, bought utensils and furniture that were often still produced in workshops no more than two hundred kilometres from their home, and spent most of their income in shops situated within 1 kilometre of their home. They could also call on repairmen such as electricians, mechanics or plumbers who gave the best of their capacities to get the appliances working again. One of the indictments of the students in May 68 was a cry against the **emerging consumption society**. Multiple were already the closures of factories in textiles, mechanics, metallurgy throughout Europe and America. Many utensils, products, food, etc. that we currently consume as families were now produced on an industrial scale, often even far from home, or with parts that have completed a 4-month sea voyage. The post-industrial consumption society has also become a throwaway society, with concepts such as fast food, fast fashion and even fast furniture.

It is only from the second decade of the twenty-first century that the multinationals that had hitherto been geared to a type of hyper-consumption and also stimulated this behaviour, were confronted with a call for change. Their first reaction has been one of **greenwashing**: pretending. Poignant examples are H&M and Ikea that supposedly greened their production, but only did this with words. And after a while the other – smaller – companies looked down on this fake behaviour. Because studies from independent research institutes such as the British Eco-Age were published that denounce such practices. <sup>3</sup>

And here we come to the core of our argument: the evolution from linear economy to circular economy cannot be imposed from above and must also be developed from an economically sound model. An example is **packaging**: in Europe there has been a trend for twenty years - and later laid down in European directives - to make the polluter pay for the processing of his waste. Organizations have therefore arisen in every country, in which the business sectors are the shareholders, to recover the packaging of their goods and even recover the entire discarded goods. And they have to do something with that: so, a thinking about recycling has arisen based on the principles mentioned above: **Reduce, Reuse and Recycle**. A recycling industry has thus emerged that is achieving great first successes. This process has not yet started in the US: the companies left the recovery of packaging to the local government, which sold it to China. It was a non-profit operation that should cost the municipalities and counties nothing. Until at the end of 2018, China closed the door to American packaging and municipalities were saddled with a recycling hangover. It is only now, 2021, that a number of states (New

York, California, Indiana, Massachusetts, Maine and Oregon) are starting to take steps to copy the European – and also Canadian – “polluter pays” <sup>4</sup> model. <sup>5</sup>

### 3. CIRCULAR ECONOMY: WHAT IS IT REALLY ABOUT?

Québec Circulaire, a group of French-Canadian organizations focused on the transition to this new mode, defines the circular economy as follows: “New economic model aimed at decoupling economic growth from natural resource depletion and environmental impact through two main mechanisms: 1) **Rethinking our production-consumption methods to consume fewer resources and protect the ecosystems that generate them** 2) **Optimize the use of resources already circulating in our societies.**” <sup>6</sup>

Our organisation, European Academy of the Regions, that advocates the regionalisation of a number of economic and socio-cultural sectors, closely follows the development of the circular economy. The reader will notice later that the most successful initiatives are taken by regions and/or cities. Since the beginning of May 2021, we have therefore set-up a blog in which newspaper articles are translated from various countries to English with examples of successful circular economy initiatives or of critical studies: [earaercircular.tumblr.com](http://earaercircular.tumblr.com).

### 4. RESEARCH ABOUT PRESS INTEREST ON CIRCULAR ECONOMY AND CREATION OF AWARENESS

To date, we have made a statistical study on the 100 selected articles <sup>7</sup> published between 3/5/2021 and 3/9/2021 that will give the reader an idea of the themes that are most frequently discussed and of the remedies that are created. The articles come from newspapers and magazines from Belgium (Dutch and French), the Netherlands, Germany, Spain, France and the US and to a lesser extent from Switzerland and Canada. Here is an overview of the topics covered:

Global topic	Topics	Number of occurrences
Reuse	food waste, thrift shopping, recycling, second hand clothing, refurbished devices	25
Innovation	CO2 Compensation, disposable packaging, green chemistry, hemp benefits, sustainable alternatives, bioplastics, sustainable furniture	12
Water management	groundwater management, waste water management, heat networks	11
Circular building	redevelopment projects, sustainable construction, circular building	10
Farming	biomass, classical biocontrol, aquaponics, short food circuit, sustainable food, system, urban farming	7
Circular economy promotion	circularity, composting, economic advantages of circular economy	7
Negative elements	Deforestation, plastic waste	4
Recycling materials	matrasses, electric cars, flood waste, ocean plastic, recycling packaging, sustainable fashion, recycling furniture, recycling plastics, battery recycling, sustainable shopping, waste treatment, recycled plastics, recycling textile, waste processing, recycling	1

	materials, waste recycling, sustainable materials	
Way of life	waste avoidance	1

As a Dutch article<sup>8</sup> from the very useful electronic newsletter Change Inc already points out: there is a lot of good will, but a lot still needs to be achieved, especially when it comes to circular techniques such as the **reuse of materials: plastics** in the first place, since there are 80,000 different types that are often used in combination and the result of which becomes difficult to recycle, **batteries** in the second place, which in turn gives electric cars an Achilles heel, **concrete** in the third place because breaking down and clearing sorted rubble is a perilous and therefore expensive undertaking. **Textiles**, on the other hand, are going in the right direction, especially when it comes to natural yarns, jeans are a headache because they are run through by chemicals, among other things to stretch them.<sup>9</sup> It is very striking that so few articles are devoted to innovations, not because universities do not work on them, but mainly because it is the large companies that do not want to invest in completely new production processes. Small-scale agriculture is regularly brought to the attention, but does not appeal to the general public so much: it is difficult and an important effort to make time for varied shopping. We feel that especially avoiding plastic packaging has become a hype that consumers are starting to pay attention to. But here too, according to Rogers' innovation theory<sup>10</sup>, we are still only in the stage of the innovators and early adapters and it is the first hesitant early majority that should start to act. Circular business models such as leasing<sup>11</sup> sofas or electrical appliances instead of buying them, allowing manufacturers to take them back and rearrange them, has so far been a theory that has been implemented only very modestly. The share economy is gradually getting underway, especially with bicycles and steps in cities. But is it sustainable in view of the multiple abandoned pieces alongside the road.

## 5. TECHNOLOGY AS AN ACCELERATOR OF PROCESSES AND BUSINESS MODELS?

**Large companies** that are serious about their transition to a circular economy are **using technological innovation** as an ally to accelerate. The strategy often is based on four axes. **Ecodesign:** The products are based on approaches that meet sustainability criteria from birth, allowing them to extend their service life and increase the subsequent recycling of their components. **Efficiency and innovation of processes:** it is about optimizing resources and processes so that waste is given a new destination. **Renewable energy and alternative raw materials:** Renewable energy sources and raw materials of residual origin are used in the manufacture of the products. **New consumption patterns:** Initiatives are promoted that prioritize renting over product purchases, promoting more responsible consumption.<sup>12</sup>

Pressured by public opinion that has reacted scandalously to the news that returns from e-commerce for fashion brands have been incinerated, major brands have turned to technology that allows a customer to better see how a garment would fit on his/her body. Zalando wants to integrate that technology on its platform. Clothing chain H&M is also developing such a virtual fitting room. It is not yet known when these developments will be ready for use.<sup>13</sup>

## 6. CIRCULAR ECONOMY: THE TRIPLE HELIX ONCE AGAIN

In our study, we also pay attention to indications of how initiatives are created, who is the influencer:

Initiator/Influencer	Number of articles in which mentioned
company initiative	50
regional approach	39
academic contribution	17
public agencies	16
public controle institutes	8
Governments + companies, smart cities	4
ngo initiative	3
reverse logistics	2

These are very striking results. Many initiatives have arisen from companies whose top management is aware of the bend that urgently needs to be made and who also see commercial opportunities to start early. They are often supported by their **trade association**, especially when the industry has a large number of financially strong players, who allocate sufficient resources to their trade association to carry out R&D or have it done. They also influence legislative initiatives by speaking out for or against them. In the discussion about levying a deposit for beverage cans in France, a large number of industry associations spoke out in favour of introducing this.<sup>14</sup> The industry associations of professionals in the recycling industry, on the other hand, expressed their reluctance. In the US, the lobby group Ameripen, a group of stakeholders from the packaging industry<sup>15</sup>, has recently suggested that they are open to the idea of EPR, extended producer responsibility (see above).

There are also a number of **cooperative initiatives**, mainly in southern Europe, that still succeed in creating successful initiatives from a small-scale approach. The large Basque cooperative bus builder Irizan is collaborating with the Spanish public transport company Iberdrola in a plan for **city buses, battery recycling and smart charging network**<sup>16</sup>. La Fabrique Circuit Court in the province of Namur in Belgium brings together cooperative processing workshops, independent workshops and logistics spaces. All committed to the **short food chain**. An indispensable link for small artisan producers<sup>17</sup>. In Antwerp, a cooperative association Warmte Verzilverd has persuaded the multinational Agfa-Gevaert to use its **residual heat** in a new residential area a few kilometres away<sup>18</sup>.

A second important player in this conversion is the academic world, **especially faculties or even entire universities** that have been conducting research into new materials or new applications for a long time, such as Wageningen and Saxion in the Netherlands, BOKU in Vienna, Hochschule München, Universities of Ghent and Antwerp, Aalto in Finland, Oviedo in Spain, etc. Large NGOs also contribute by commissioning studies: WWF, Greenpeace, Ellen MacArthur Foundation, etc. The initiatives sometimes come from the university itself, sometimes on behalf of companies or industry associations, sometimes from regional authorities with sufficient funds, but they are stimulating.

Many universities are taking initiatives to make their students, and thus future managers and engineers, aware of a change in attitude both privately and in the

economy in order to promote the circular economy. For example, all universities and technical universities in the German state of Brandenburg have developed initiatives to consciously encourage their students to develop different ways of living. Solar systems, environmental management, special degree programs, changed menu in the cafeteria: for universities and technical universities in Brandenburg, climate neutrality and sustainability in the course of study are very topical. Even the organization for student facilities, Studentenwerk Potsdam, is also enthusiastically participating in this: it draws energy from 100 percent green electricity, it **recycles the wastewater** from the showers and hand basins, it managed that solar thermal energy on the roof of the older building also benefits the new dormitory, **all plastic bottles and tetrapaks** are currently being **removed** from the range and replaced **in the cafeterias** by more sustainable glass bottles and every Wednesday in the eight canteens and eight cafeterias run by the Studentenwerk, only **meat-free meals** are served.<sup>19</sup>

The traditional third player are the authorities, but very often regional governments or large cities. They stimulate by doing **seed financing**. The Walloon and Brussels governments in Belgium have thus set up and provided means for several public agencies to link circular economy projects to social projects<sup>20</sup>.<sup>21</sup> But also, by enacting local regulations. For example, the government of Flanders imposes through its public tenders<sup>22</sup> that new public construction initiatives are to be realised on the principles of the circular economy. As a result, contractors are forced to organize themselves in a certain direction. The city of Apeldoorn in the Netherlands, on the other hand, put out a tender<sup>23</sup> to realize a link between its database with all existing building materials in public space and a **digital marketplace**. This makes it possible to trade released materials so that they can be reused elsewhere.

The same often happens in France and in Spain where it is the regions and/or departments that are pioneers in encouraging universities and industries to take initiatives to convert the linear economy into a more climate-friendly and planet-friendly circular economy.

## 7. CIRCULAR ECONOMY AND AWARENESS

During the exercise, we not only translated the 100 articles into English and published them on tumblr.com but also on LinkedIn where we have more than 2000 followers. LinkedIn's statistics also allow us to find out how many contacts clicked on the article and thus were interested in it and how many also liked the article. Traditionally this is 2 to 3%. Here is an overview of the articles that have received more than 100 clicks.

The result indicates that there are no topics that appeal more than others. From second-hand clothing, to recycling garbage, water and concrete, cleaning the soil by plants, the reuse of PET bottles by the industry: it attracts the interest of many. It is clear that we have entered an era where, admittedly in Western Europe, a certain category of people is taking an effective interest in all initiatives taken to bring the climate challenge under control, even if it will affect their own way of life.

Title	Topic	Newspaper	Country newspaper	Cases from	Date	Views	Likes
Voka study: circular economy is becoming contagious	recycling	Trends	B	B	16/06/2021	361	6
Between emergency and ecology, how to recycle the mountain of waste formed by the floods?	emergency	LLB	B	B	20/07/2021	333	4
Will plants also soon remove PFOS from the soil?	phytoremediation	De Standaard	B	B, F	31/07/2021	328	4
Fashion recycling in the Bahnwärter Thiel in Munich	second hand clothes	SDZ	D	D	26/08/2021	253	2
What is the future for the ruins of houses after the floods?	sustainable construction	De Standaard	B	E, B, USA	24/07/2021	244	2
Plastic bottle tyres: Continental in favour of using recycled PET	recycled plastic	SDZ	D	D,USA,F	3/08/2021	224	2
Green façade that purifies shower water and insulates the house? UGhent pilot project turns out to be a success	waste water treatment	VRTNews	B	B	12/07/2021	221	3
Antwerp organises action to throw waste in the garbage can outdoors as well	waste recycling	De Standaard	B	B	2/07/2021	210	3
Ocean Cleanup's second attempt to remove plastic from the sea is now in full swing	ocean plastic	Change Inc	NL	NL	12/08/2021	209	7
Dutch biomass causes deforestation in Estonia	deforestation	Trouw	NL	NL, EST	7/07/2021	201	1
Processing 150,000 tonnes of flood waste will take up to a year	waste treatment	LLB	B	B	11/08/2021	190	3
Sustainable fashion or a haven for quacks?	sustainable fashion	De Standaard	B	GB	30/06/2021	189	1
The obstacle course to 'green' Lego blocks	recycled PET bottles	De Tijd	B	DK,B	23/06/2021	185	3
True price: the solution for food prices that are too low	sustainable food system	Change Inc.	NL	NL	2/07/2021	184	1
E-cars are better than their reputation	battery recycling	SDZ	D	D	21/07/2021	181	1
Ecological building from old concrete	circular building	SDZ	D	D	16/07/2021	179	3
Fashion brands are diving into ocean plastic, but does it really save the oceans?	ocean plastic	Knack WE	B	GB	9/07/2021	177	1
Recycling in America Is a Mess. A New Bill Could Clean It Up.	waste processing	NYT	USA	USA	27/01/2021	176	3
What can cardboard furniture do?	recycling materials	SDZ	D	D	30/07/2021	174	2
"Green Amazon" launched by two Belgians	impact entrepreneurship	LLB	B	B,F	8/08/2021	170	1
'We really need to get rid of that plastic now'	plastic waste	Change Inc.	NL	A	16/07/2021	163	3
Dutch Municipality launches database and marketplace for circular materials	circular building	Change Inc.	NL	NL	7/07/2021	160	1
'The ban on washing cars with tap water was just a foretaste'	water management	De Tijd	B	B, L	27/07/2021	155	2
Elephant grass stores four times as much CO2 as a forest. This company therefore wants to plant it on all wasteland.	CO2 compensation	Change Inc.	NL	NL	8/07/2021	153	0
Make Brussels an orchard city	urban farming	LLB	B	B	5/07/2021	152	2
When what your grandparents did was the basis of the circular economy	composting	El Pais	E	E, NL, FIN	18/03/2021	150	2
The nasty consequences of fast furniture	recycling furniture	Trouw	NL	NL	21/08/2021	150	2
When what your grandparents did was the basis of the circular economy	waste recycling	El Pais	E	E, NL, FIN	18/03/2021	150	2
The not so circular journey of household waste in Spain	circularity	El Pais	E	E	2/05/2021	140	0
The Cotton Tote Crisis	recycling textile	NYT	USA	USA, DK; CDN, S, AUD	1/09/2021	140	5
Clean and safe city center through smart waste collection and digital innovation	waste recycling	Change Inc.	NL	NL	15/jul/21	139	2
Food waste app	waste food	SDZ	D	DK	24/07/2021	134	0
The Circular Economy of Recycled Paper	company initiative	NYT	USA	NL	18/11/2014	133	1
Maine Will Make Companies Pay for Recycling. Here's How It Works.	recycling materials	NYT	USA	USA	21/07/2021	133	0
Water from plastic bottles has hundred times more impact on the environment than tap water	plastic waste	Change Inc.	NL	NL,E	6/08/2021	125	5
Returns are free, but that sweater that didn't fit might go into the incinerator	waste management	Trouw	NL	NL,UK	16/08/2021	119	0
This start-up wants to empower the business of refurbished mobile phones and tablets	refurbished laptops	LLB	B	B	27/07/2021	115	0
The Beauty Brands Cutting Down on Packaging	disposable packaging	NYT	USA	USA,DK,I	14/07/2021	106	2
At the initiative of Dutch Agricultural University, science and industry make hard plastic from agricultural waste	bioplastics	Change Inc.	NL	NL	26/07/2021	105	0
Repairing electrical appliances is becoming easier in France and in Europe	reuse	InfoduJour	F	F, EU	20/04/2021	105	3
Things are not yet running smoothly within the circular economy	waste avoidance	SDZ	D	D	20/08/2021	105	1
At the initiative of Dutch Agricultural University, science and industry make hard plastic from agricultural waste	waste recycling	Change Inc.	NL	NL	26/07/2021	105	0
Iberdrola and Irizar join forces in electric mobility	battery recycling	El Pais	E	E	20/07/2021	101	0

## 8. CIRCULAR ECONOMY: WHAT CONTRIBUTIONS CAN REGIONS MAKE?

As already mentioned, there are numerous puzzle pieces that all need to fit together. The first part concerns the collection and processing of waste. Although **separate waste collection** is promoted in the EU, this is often still very rudimentary in many member states. **Composting** is one of the basic activities that a family with a house can do themselves. There are also towns such as Vitoria in the Spanish Basque Country that offer communal composting services, for those who live in an apartment and don't have space to compost. The municipality installs these devices in certain parts of the city and users only have to go there to deposit organic waste. Disused clothing or electrical/electronic equipment should also be taken care of by the local authorities.<sup>24</sup> Electronic components and clothing go to the container parks<sup>25</sup> that the municipalities have built in different parts of each city. Separate collection is being implemented even more thoroughly in thirty Dutch cities. Where in the past they mainly collected residual waste, paper and organic waste, there will soon be a line for orange peels, coffee grounds and foil. **Smart collection** is concerned with the issue of how we can collect waste separately at the source in an efficient and sustainable way, without the inner-city environment silting up with trucks.<sup>26</sup> Antwerp in Belgium encourages residents and visitors to throw their waste in the trash can outside the home as well. By scanning the packaging, they can save digital coins that they can cash in at local merchants.<sup>27</sup>

Another puzzle piece consists of **stimulating initiatives**. For example, the municipality of Haarlemmermeer is the first municipality in the Netherlands to use **circular asphalt** in a motorway. The supplier of the asphalt, construction company Dura Vermeer, only uses residual waste for the asphalt mixture, and does not add any new products to it<sup>28</sup>. Another example of stimulation can be found in the Walloon Region in Belgium. Use the waste of one SME as raw material for another SME. Promote reuse or recycling instead of incineration. Reducing unnecessary transport ... These are the objectives of a circular economy pilot project that is being carried out in a zoning plan in the Liège region. This project, initiated by the Walloon minister for Sustainable Development, aimed to make SMEs network in order to bundle their waste management and promote their recycling or reuse.<sup>29</sup>

Ultimately, **legislation** is a final piece, at whatever level. The public sector is by far the largest customer of the construction sector in Switzerland, accounting for about half of the order volume. It has an important role model function by ordering more recycling material. With **the new procurement law** that came into effect on January 1, 2021, quality and sustainability should become more important. By also introducing the construction with recycled material in the tender conditions, builders make an effective and concrete contribution.<sup>30</sup>

## 9. FINAL REMARKS

Circular economy can only be successful if companies see a profit model in it, or are forced to change their course by public opinion because of negative perception. We are not yet there: Southern Europe has not yet really developed a recycling economy that can develop profitable activities and therefore act in stand-alone modus. This is yet the case in Northern Europe. The **US**, on the other hand, is **lagging**. This is mainly due to a **lack of legislation**. Yet it is striking that quality newspapers such as the New York Times regularly refer to the European legislative framework, which has grown from a consensus. The large non-profit organizations also take the European directives as a starting point and example. The stubborn



refusal of American multinationals to release funds for research to develop business models in that direction made them build an advantage over European companies. This attitude has disrupted the level playing field. We argue that this aspect should also be raised at G-7 and G-20 meetings. This kind of disruptive economy is one that is based on greed and not innovation. It is a dangerous precedent in a world where climate change is the main jammer of the century.

## 10. ANNEX 1 – THE DATABASE OF ARTICLES – ALL ARTICLES CAN BE FOUND ON [earaercircular.tumblr.com](https://earaercircular.tumblr.com)

Title	Newspaper	Country newspaper	Cases from	Date
Munich International Motor Show: Now in eco mode	SDZ <sup>31</sup>	D	D	3/09/2021
Solutex, the most sustainable omega 3 is extracted with CO2 in Aragon	El Pais	E	E	2/09/2021
The Cotton Tote Crisis	NYT <sup>32</sup>	USA	USA, DK; CDN, S	1/09/2021
Recycling companies are struggling with high-tech carbon plastic	SDZ	D	D	29/08/2021
Universities and Technical Universities in Brandenburg-Germany: Climate-conscious and sustainable	SDZ	D	D	28/08/2021
Universities and Technical Universities in Brandenburg-Germany: Climate-conscious and sustainable	SDZ	D	D	28/08/2021
Fashion recycling in the Bahnwärter Thiel in Munich	SDZ	D	D	26/08/2021
The nasty consequences of fast furniture	Trouw	NL	NL	21/08/2021
The tasty and ecological copper business: Telefónica obtains 131 million with the recycling of cables	El Pais	E	E	20/08/2021
Things are not yet running smoothly within the circular economy	SDZ	D	D	20/08/2021
Belgian multinational Agfa-Gevaert directly contributes to circular economy neighborhood initiatives	VRTNews	B	B	17/08/2021
Returns are free, but that sweater that didn't fit might go into the incinerator	Trouw	NL	NL, UK	16/08/2021
Ocean Cleanup's second attempt to remove plastic from the sea is now in full swing	Change Inc	NL	NL	12/08/2021
Processing 150,000 tonnes of flood waste will take up to a year	LLB <sup>33</sup>	B	B	11/08/2021
"Green Amazon" launched by two Belgians	LLB	B	B, F	8/08/2021

Scarcity of raw materials makes it more difficult to get a foot on the housing ladder	SDZ	D	D	8/08/2021
Water from plastic bottles has hundred times more impact on the environment than tap water	Change Inc.	NL	NL, E	6/08/2021
Facing Severe Droughts, Developers Seek to Reuse the Water They Have	NYT	USA	USA	4/08/2021
Plastic bottle tyres: Continental in favour of using recycled PET	SDZ	D	D, USA, F	3/08/2021
This robot cleans up the beach and does it better and faster than humans	Change Inc.	NL	USA	3/08/2021
Will plants also soon remove PFOS from the soil?	De Standaard	B	B, F	31/07/2021
Everything you need to know about the waste sector in the Netherlands.	Change Inc.	NL	NL	30/07/2021
What can cardboard furniture do?	SDZ	D	D	30/07/2021
A circular economy requires greater national commitment in Spain	El Pais	E	E	29/07/2021
'The ban on washing cars with tap water was just a foretaste'	De Tijd	B	B, L	27/07/2021
This start-up wants to empower the business of refurbished mobile phones and tablets	LLB	B	B	27/07/2021
At the initiative of Dutch Agricultural University, science and industry make hard plastic from agricultural waste	Change Inc.	NL	NL	26/07/2021
At the initiative of Dutch Agricultural University, science and industry make hard plastic from agricultural waste	Change Inc.	NL	NL	26/07/2021
Food waste app	SDZ	D	DK	24/07/2021
What is the future for the ruins of houses after the floods?	De Standaard	B	E, B, USA	24/07/2021
E-cars are better than their reputation	SDZ	D	D	21/07/2021
Maine Will Make Companies Pay for Recycling. Here's How It Works.	NYT	USA	USA	21/07/2021
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In Spanje heten die puntos limios.

In annex 1 the complete list of articles including their origin

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