

Circular policy action brief

2019 update



NAVIGANT

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Introduction

Multinational companies are subject to regional, national and state circular economy policies because value chains are global and interlinked. It is crucial for business to keep up with the latest development of these policies. This second edition of the [Circular policy action brief](#) supports business in its aim to stay up-to-date on regulatory and framework developments in the circular economy. The first edition covered circular economy policies for the European Union (EU), EU Member States, China and India,

with a focus on resource recovery as a prominent business model. This year, the landscape overview includes additions and updates to existing circular economy policies for the EU, China and – newly – the U.S. state of California that have taken place in 2019, examining them on country, sector and business model levels.



②

Summary: focus country, sector, business model

The 2018 Circular policy action brief showed that there is a clear momentum on circular policy development across EU Member States. Similar to the first edition, this second edition of the brief categorizes new policies in two main ways: regulations and frameworks. This includes the highly-anticipated EU Single-Use Plastics Directive in support of the EU Plastics Strategy, which restricts the use of wasteful products and advances the circular economy.

The circular economy has started to gain traction in North America as well. The state of California is a good example of this, having developed more than 10 policies that directly relate to the circular economy in the last decade.

There is a strong focus on circular supplies in emerging policies, recognizing the opportunity presented by sustainable secondary materials due to increasing resource scarcity and restricting the use of non-circular products. This is particularly relevant with plastics – and the subsequent bans on some items – and pushes for bio-based initiatives within larger strategic frameworks, as seen in Finland.

Policy roadmaps published in previous years are also cascading down to the sector level. The construction sector feels this in particular, as circular initiatives zoom in on local municipalities and the built environments. Stimulated by consumer demand, many policies target the sustainable packaging industry, with a strong focus on plastics in the food and beverage industry.

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Policy country overview

Updates to the policy brief in 2019 include:

- Four new/updated policies introduced in 2019;
- 17 existing policies for California, with four pending bills added to this year's brief, and;
- 28 additional policies that governments released in previous years.

Brand new policies introduced this year mainly reflect either strategy for a longer-term vision or policy implementation based on established framework or directives.

The section below contains an overview of updates added this year. It summarizes four of the new policy updates this year and the key findings in the new geography added this year – California.

An overview per region, the national name of the policy and a description of the policies are available in the Annex.

Policies introduced in the past that the 2018 2018 Circular Policy were not include because they either relate to and support the new policy updates or give better context for the policies still in effect today are also included in the Annex.

③ Policy Country Overview



On the EU level, two new directives focus on two industries. Both the new EU Single-Use Plastics Directive and the EU Fertilizing Products Directive are examples of implementation or regulatory schemes that advance previous agendas, such as the EU Plastics Strategy and the EU Circular Economy Action Plan. The Single-Use Plastics Directive tackles the 10 most found plastic waste items and promotes sustainable alternatives. As mentioned, secondary raw materials are in greater focus this year. The EU Fertilizing Products Directive, for example, encourages larger scale fertilizer production from domestic organic or secondary raw materials, in line with the circular economy model originally put forth in the Circular Economy Action Plan. This would enable the transformation of waste into nutrients for crops.



In Spain, recent policies cover both implementation and strategy efforts. Under the umbrella of the Spanish Circular Economy Strategy (Estrategia Española de Economía Circular), the Local Circular Economy Strategy of the FEMP (Spanish Federation of Municipalities and Provinces) focuses on initiatives at the municipal level by targeting cities and tackling water consumption, natural resource use and sustainable urban design. Relative to past years, this is a more urban and localized approach to implementing the circular economy. It aligns with broader Spanish initiatives, such as the Spanish Circular Economy Strategy introduced in 2017 and the Pact for a Circular Economy in Spain (Pacto por una Economía Circular en España) that commits to reductions in the use of non-renewable natural resources, to improvements in product life-cycle analysis and to incorporating eco-design criteria, among other standards.¹



Finland updated its existing national circular economy roadmap with new measures. Revision and assessment are key to improving any circular economy policy. Version 2.0 of the Finnish Roadmap to a Circular Economy (2016-2025) is no exception. Finland has outlined 30 new actions, covering sustainable food-based systems, life cycles, transport and raw material loops with a particular focus on cross-sectoral collaboration. The Finnish update, similar to those in Spain, also covers more actions that could be taken by the central government, municipalities and cities, business and citizens. These include actions and case studies that cover the built environment through construction, secondary raw material usage in textile waste and, to some extent, voluntary agreements between government and businesses similar to the Green Deals of the Netherlands.²



The U.S. State of California, as the fifth largest economy in the world by GDP,³ is of particular focus within the United States. California continues to advance in the circular economy. In particular, it has focused on a wide variety of regulations and strategies⁴ for waste management, packaging and recycling in the food and beverage industry, including the Beverage Container Recycling Program, Food Service Packaging at State Agencies, and Single-Use Carryout Bag Ban. Others emphasize plastic waste and pollution, especially marine microplastics.

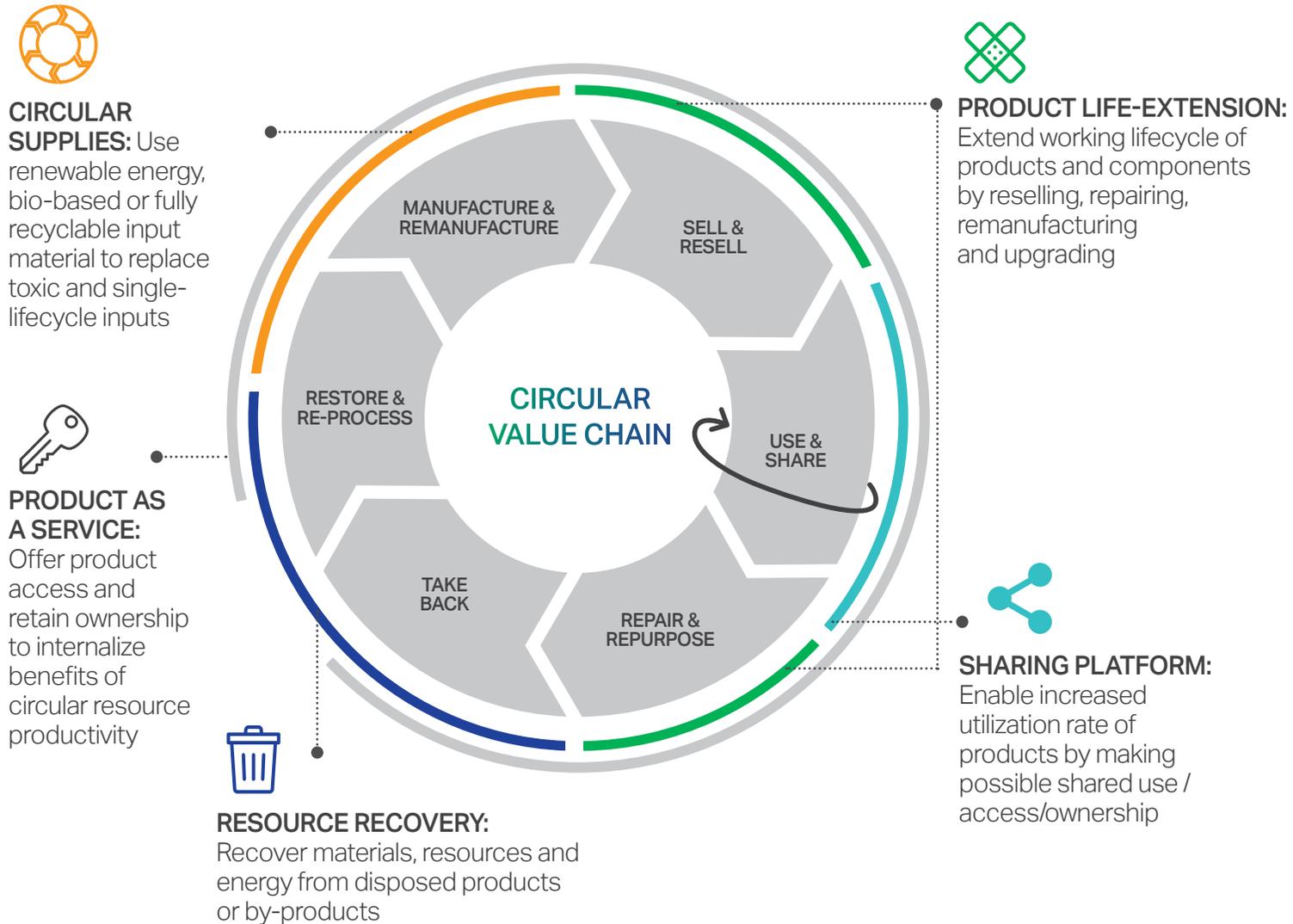
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Policy overview: business model focus

[WBCSD's CEO Guide to the Circular Economy](#) features the five circular business models that can support the circular economy: circular supplies, resource recovery, product life extension, sharing platform, product as a service. Thus, the first edition of the Policy Brief – mostly focused on resource recovery – the idea that at the end of a product's lifetime, the value chain can still embed value. In this second edition, updates emphasize circular supplies in addition to resource recovery.

For example, the Finnish government aims to further develop Finland as the forerunner in circular economy by including a temporary circular investment subsidy to accelerate the transformation and promote recycled materials across industries. Likewise, the EU Single-Use Plastics Directive will help promote circular supply alternatives to traditionally wasteful products.

④ Policy landscape & overview: business model focus



Underpinning recent developments in California is a push for producer responsibility in recycling policies. A stronger push for circular supplies, resource recovery and products as a service can be seen due to a global depression in the market scrap value of many recycled commodities.⁵ The export of recyclable materials is a key component of California’s recycling infrastructure (about one third of recyclable materials).⁶ Unsorted, mixed paper and mixed plastics were exported to China. However, the National Sword Policy, implemented in China in 2018, restricts the import of foreign recyclables and by the end of 2019 will restrict imports of all solid waste.

④ Policy landscape & overview: business model focus

The table below provides an overview of circular policies in California categorized by the five circular business models. Each policy provides an incentive or point of regulation that supports these business models. For example, the Environmentally Preferred Purchasing Ordinance incentivizes circular supplies through public procurement. Similarly, the 2016 California Building Standards Code specifies targets aimed at extending the life of materials used in construction.

Pending bills⁷ reexamine recycling targets and existing regulation as California pushes for recycling infrastructure reform, decreasing dependency on overseas markets. This includes AB 1080/SB 54, otherwise known as the California Circular Economy and Plastic Pollution Reduction Act, which will increase and extend existing law that sets targets for solid waste generation that not less than 75% be source reduced, recycled or composted by 2020 and that supports single-use packaging regulations.

	 Circular supplies	 Resource recovery	 Product life extension	 Sharing platforms	 Product as service
Policy examples	<ul style="list-style-type: none"> Approved Alternative Products for Sustainable Carpet for City Departments Mandates recyclable components of up to 45% in carpets 	<ul style="list-style-type: none"> AB 1419 – CRT Glass Recycling Reduces environmental risk of stockpiling by creating recycling framework 	<ul style="list-style-type: none"> CALGreen Code or 2016 California Building Standards Code Specifies targets for salvage and reuse of 65% of demolition waste 	<ul style="list-style-type: none"> The 2018 California Ocean Litter Prevention Strategy Promotes collaboration between the Ocean Protection Council and related stakeholders to prevent waste pollution 	<ul style="list-style-type: none"> California's Beverage Container Recycling Program Consumers pay California Redemption Value (CRV) and receive CRV refunds when they redeem containers at a recycling center
	<ul style="list-style-type: none"> SB 458 – Beverage Container Recycling Pilot Projects Promotes the recyclability of wasted products in non-serviced areas 	<ul style="list-style-type: none"> Sales tax exemption on recycling equipment Businesses that use recycled feedstock are tax-exempt 			<ul style="list-style-type: none"> Single-Use Carryout Bag Ban (SB 270) Mandates 10 cent charge on non-recyclable, single-use grocery bags
	<ul style="list-style-type: none"> SB 1422 – Testing Drinking Water for Microplastics Supports the elimination of non-biodegradable resources in drinking water 	<ul style="list-style-type: none"> The California Integrated Waste Management Act of 1989 Recycling or using 50% of all solid waste for composting activities 			<ul style="list-style-type: none"> AB 1884 – Straws Upon Request Reduces single-use plastic straws through don't ask, don't use policy
	<ul style="list-style-type: none"> SB 1263 – Statewide Microplastics Strategy Supports the elimination of non-biodegradable resources 	<ul style="list-style-type: none"> SB-1335 – Solid Waste: Food Service Packaging: State Agencies, Facilities, and Property Food service facilities located in a state-owned facility to dispense prepared food using packaging deemed reusable, recyclable or compostable 			
	<ul style="list-style-type: none"> The Environmentally Preferable Purchasing/ Precautionary Purchasing Ordinance Maximizes post-consumer recycled content and readily recyclable or compostable materials through public procurement 				

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Policy overview: sector focus

Of the new policies added to this brief, there are several sector-specific policy targets similar to the 2018 assessment. The construction, pulp and paper as well as food and beverage service sectors are most affected by new policies in 2019. However, other sectors will feel impacts as governments focus on plastic consumption, the built environment and new roadmaps.



⑤ Policy overview: sector focus

Automotive	<p>No new circular economy policies specifically pertain to the automotive sector. However, sustainable urban design and a focus on local municipalities in Finland and Spain can potentially move into this space. In particular, as Finland addresses 30 new actions in the second iteration of its national roadmap, several focus on new business models in the private sector and extended research into battery-sector operations. The local circular initiatives seen in Spain will also promote sustainable mobility and encourage sustainable transport throughout cities as municipal leaders tackle 25 new measures to endorse the circular economy.</p>
Electronics	<p>Various packaging laws may affect electronics. There are many examples of California redefining and creating packaging laws, including the Sustainable Packaging Act and the Environmentally Preferred Purchasing (EPP) ordinance. For example, the EPP has led to the adoption of the Electronic Product Environmental Assessment Tool (EPEAT) rating system as environmental purchasing criteria is used by state agencies. State contract specifications use EPEAT as a control measure, recognizing laptop or notebook computer and monitor certification. This will expand to printing devices, televisions and cell phones. The EU-wide plastic packaging ordinance will also have similar effects.</p>
Construction	<p>In the construction sector, Spanish and Finnish initiatives aim to address circularity in the built environment. Construction practices are a key action for the Finnish roadmap and the Green Building Council Finland sets voluntary criteria for the property and construction sector.⁹ Finland is aiming at getting whole life carbon assessment of buildings included in building regulations - latest by 2025. Similarly, the Spanish Federation of Municipalities and Provinces (FEMP) will promote urban resilience and the efficient use of natural resources to reduce construction waste. (note: http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/161796/YM_2019_23_Method_for_the_whole_life_carbon_assessment_of_buildings.pdf?sequence=1&isAllowed=1) This will indirectly affect steel consumption in the construction sector as organizations working in the built environment integrate circular solutions.</p>
Steel	<p></p>
Pulp & paper	<p>New regulations on the use of plastics, circular design in packaging and waste management will directly impact the pulp and paper industry. The EU ban on single-use plastics will shift downstream demand to bio-based and renewable alternatives. Specific Member States recognize and try to minimize the potential impact on forest resources from paper-based packaging. For example, the company Iceland will replace plastic packaging in products under its own label with fully recyclable paper and pulp-based alternatives by 2023.</p>
Energy	<p>The energy sector, as it is not a direct target, will mostly see impacts from overarching strategy initiatives, as seen in Finland. Finland has added 30 new actions, including the electrification of transport and the realization of renewable energy growth. Battery research and storage will be a primary driver behind these actions. For example, among the 30 new actions is a collaboration among Business Finland, the University of Jyväskylä and the Council of the Tampere Region to improve networking between battery-sector operators and funding for growth-oriented companies. This aligns well with another Finnish initiative launched by Business Finland aimed at attracting leading battery manufacturers to invest in Finnish products.</p>

⑤ Policy overview: sector focus

In addition to these key sectors, the food and beverage industry is increasingly under the spotlight. For example, many of the recent policies in California address waste and recycling in packaging and plastic use. The California Integrated Waste Management Act of 1989, administered by the Department of Resources Recycling and Recovery, generally regulates the disposal, management and recycling of solid waste, including single-use plastic straws. Recent laws build upon policies such as this. The Straws Upon Request regulation and the Sustainable Packaging for the State of California Act of 2018, for instance, prohibit a food service facility located in a state-owned facility to use packaging unless the type of food service packaging is reusable, recyclable or compostable.

Additionally, the bioeconomy in recent years has become a topic of discussion in relation to the circular economy. Bio-based products can include feedstocks such as biological materials (excluding geological formations or fossilized resources such as gas or oil).⁹

The added value of using these bio-alternatives as feedstock combines the production of new and old products, such as using agricultural waste to produce onsite energy for farming. With new policy updates, for example, Finland's Roadmap to a Circular Economy 2.0 highlights the [Bio and Circular Finland program](#), which supports funding for bio-innovation and circular design through Business Finland.

Applying circularity to support sustainable bioeconomy practices is challenging, however. Multiple costs for competing residues within the economy-at-large and the quality of bioproducts influence the degree to which products are degradable, compostable and potentially reused.¹⁰ WBCSD is looking further into recent trends and policy in its bioeconomy workstream.

A combination of specific policies and overarching strategy will affect sectors in direct or indirect ways. As seen with California, governments have devoted many policies in recent years to the food and beverage service sector.

Local circular economic initiatives and larger sweeping initiatives across the EU, such as the Single-Use Plastic directive in view of the EU Plastics Strategy, will indeed impact the automotive, energy, electronics and construction sectors. The following section – the Annex – provides a comprehensive list of policies related to the policies analyzed within the brief. The Annex includes 49 policies screened across 10 countries and two regions (the EU and California), identifying the sectors impacted – ranging from agriculture, construction and pulp and paper, to energy and other commodities that do not necessarily fall under the defined areas. Additionally, the tables outline whether each one is a framework or a directive and each policy's relation to the five business models – circular supplies, resource recovery, product life extension, sharing platforms and product as a service. Finally, the Annex includes all policies shared in the first edition of the Circular Policy Action Brief.

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Annex: detailed findings

Annex: detailed findings

The table below provides an overview of the detailed findings of policies analyzed in this version of the report. This overview includes policies categorized by the respective governments as “circular economy” or that mention the “circular economy” as a main driver of this policy. However, the circular economy policy landscape is moving fast; therefore, we will update this overview semi-annually. Each policy includes the policy name, a brief description, sector, circular economy business model and if the policy is a regulation or framework. A regulation is a legal act that becomes enforceable as law, while a framework is a set of principles and long-term goals that form the basis of making rules and guidelines that provide overall direction.

NEW POLICIES INTRODUCED IN 2019

Policy information				Sector							Circular economy business model					
Country or region	Policy name (English)	Policy name (national)	Description	Regulation or Framework	Automotive industry	Electronics industry	Steel industry	Other construction	Pulp and paper industry	Energy sector	Other / General	Circular supplies	Resource recovery	Product life extension	Sharing platforms	Product as service
European Union	Fertilizing Products Regulation	N/A	On 21 May 2019, the European Commission adopted a regulation that harmonizes the requirements for fertilizers produced from phosphate minerals and from organic or secondary raw materials in the EU, opening up new possibilities for their production and marketing on a large scale. The regulation sets harmonized limits for a range of contaminants, such as cadmium, contained in mineral fertilizers.	R							Agriculture	x	x			
European Union	Single-use Plastic Directive 2019	N/A	A ban on selected single-use products made of plastic for which alternatives exist on the market: cotton bud sticks, cutlery, plates, straws, stirrers, sticks for balloons, as well as cups, food and beverage containers made of expanded polystyrene, and on all products made of oxo-degradable plastic.	R							Food/ beverage	x	x	x		x

F= framework | R= regulation | X means that it concerns the corresponding column (eg for the first one the “x” in the circular supplies means that the policy is talking about circular supplies) | ◊ = could not be determined

NEW POLICIES INTRODUCED IN 2019

Policy information				Sector					Circular economy business model							
Country or region	Policy name (English)	Policy name (national)	Description	Regulation or Framework	Automotive industry	Electronics industry	Steel industry	Other construction	Pulp and paper industry	Energy sector	Other / General	Circular supplies	Resource recovery	Product life extension	Sharing platforms	Product as service
Finland	Leading the Cycle – Finnish Roadmap to a Circular Economy 2016-2025, 2.0		This is the second, updated version of the original Finnish roadmap. Measures are under way in the central government, towns and cities, the business world and the everyday lives of Finnish people. The roadmap lists almost 30 new vital actions adopted by organizations in Finland in addition to a number of suggestions aimed at the central government that organizations have not yet embraced.	F							X	X	X	X	X	X
Spain	Local Circular Economy Strategy of the FEMP	Estrategia Local de Economía Circular de la FEMP	Spain's Local Circular Economy strategy is a commitment to Spanish cities for the circular economy inspired by Europe-wide commitments. The strategic axes form a total of 25 measures, structured in four major areas: minimization of natural resource use, water consumption management, urban space sustainability and healthy behaviors.	F							X	X	X	X		X

F= framework | R= regulation | X means that it concerns the corresponding column (eg for the first one the "x" in the circular supplies means that the policy is talking about circular supplies) | o = could not be determined

EXISTING POLICIES IN CALIFORNIA

Policy information				Sector							Circular economy business model					
Country or region	Policy name (English)	Policy name (national)	Description	Regulation or Framework	Automotive industry	Electronics industry	Steel industry	Other construction	Pulp and paper industry	Energy sector	Other / General	Circular supplies	Resource recovery	Product Life extension	Sharing platforms	Product as service
California	The California Integrated Waste Management Act of 1989		Requires each city or county plan to include an implementation schedule that shows diversion of 50% of all solid waste by 1 January 2000 by source reduction, recycling and composting activities.	R							Waste		x			
California	The Sustainable Packaging Act; SB-1335 Solid waste: food service packaging: state agencies, facilities, and property		The Sustainable Packaging for the State of California Act of 2018 mandates food service facilities located in a state-owned facility to dispense prepared food using packaging approved as reusable, recyclable or compostable.	R							Food		x			
California	The Environmentally Preferable Purchasing/Precautionary Purchasing Ordinance		The Mayor signed the Environmentally Preferable Purchasing/Precautionary Purchasing Ordinance on 17 June 2005 and it became effective on 18 July 2005. It aims to: maximize post-consumer recycled content and readily recyclable or compostable materials; favor long-term use through product durability, repairability and reuse; and consider the life cycle economics of a product that includes manufacture, transportation, use and disposal.	R	x	x	x	x	x	x	x	x	x		x	
California	Approved Alternative Products for Sustainable Carpet for City Departments		These regulations set forth the minimum requirements for environmentally preferable carpet products approved for City purchase effective March 2018.	R							Carpet	x	x	x		x
California	CALGreen Code or 2016 California Building Standards Code, Part 11		This code of standards serves as part of the California Building Standards Code known as the California Green Building Standards Code or CALGreen Code. Among other climate and energy efficiency-related codes, the construction waste reduction, disposal and recycling codes specify targets for salvage and reuse of as much as 65% of the non-hazardous construction and demolition waste.	R					x				x			

EXISTING POLICIES IN CALIFORNIA

Policy information				Sector							Circular economy business model					
Country or Region	Policy name (English)	Policy name (national)	Description	Regulation or Framework	Automotive industry	Electronics industry	Steel industry	Other construction	Pulp and paper industry	Energy sector	Other / General	Circular supplies	Resource recovery	Product Life extension	Sharing platforms	Product as service
California	AB 1884 (Calderon) - Straws Upon Request		In an effort to stop plastic pollution and reduce the overwhelming amount of single-use plastic Californians consume on a daily basis, Assembly Bill 1884 would require sit-down restaurants in California to forgo the automatic distribution of straws in every drink and instead only provide a straw when the customer requests one. The Governor signed this bill into law on 20 September 2018.	F							Food/beverage		X		X	
California	SB 1263 (Portantino) - Statewide Microplastics Strategy		SB 1263 will help the state develop a long-term strategy to deal with microplastics by requiring the Ocean Protection Council to create a Statewide Microplastics Strategy. The Governor signed this bill into law on 20 September 2018.	F							X		X			
California	SB 458 (Wiener) - Beverage Container Recycling Pilot Projects		In light of California's beverage container recycling center closure crisis, SB 458 authorizes the creation of five pilot project recycling centers across the state.	R							Beverage	X	X	X		
California	SB 270 - Single-Use Carryout Bag Ban		On 8 November 2016, California voters approved Proposition 67, the statewide Single-Use Carryout Bag Ban. As a result, SB 270 is in effect and most grocery stores, retail stores with a pharmacy, convenience stores, food marts, and liquor stores must provide a reusable grocery bag or recycled paper bag or charge at least 10 cents.	R							Food/beverage	X	X			
California	SB 1383 (Lara) - Super Pollutants		This bill requires a 75% reduction in state-wide disposal of organic waste by 2025. The State Air Resources Board adopts a strategy to reduce emissions of short-lived climate pollutants in order to achieve the following reductions below 2013 levels by 2030: 40% in methane, 40% in hydrofluorocarbon gases, and 50% in anthropogenic black carbon.	R							Climate pollutants	X	X			

F= framework | R= regulation | X means that it concerns the corresponding column (eg for the first one the "x" in the circular supplies means that the policy is talking about circular supplies) | o = could not be determined

EXISTING POLICIES IN CALIFORNIA

Policy information				Sector							Circular economy business model					
Country or region	Policy name (English)	Policy name (national)	Description	Regulation or Framework	Automotive industry	Electronics industry	Steel industry	Other construction	Pulp and paper industry	Energy sector	Other / General	Circular supplies	Resource recovery	Product Life extension	Sharing platforms	Product as service
California	AB 1419 (Eggman) - CRT Glass Recycling		The bill seeks to reduce the environmental risk inherent in the stockpiling and export of glass from monitors and televisions by creating a recycling framework for CRT panel glass. This glass has been processed and rendered harmless for a variety of end-uses; AB 1419 would clearly differentiate which recycling markets are appropriate for this material. The Governor signed this bill into law on 22 September 2016.	F							Technology	x	x			
California	Recycled Content Labeling on Beverage Containers		AB 2530 simply requires manufacturers to report the amount of virgin and post-consumer plastic they purchased the previous year. The Governor signed this bill into law on 29 September 2016.	R							Food/ beverage		x			
California	AB 888 (Bloom) - Ban on Plastic Microbeads		AB 888 bans the sale of plastic microbeads found in toothpaste, facial scrubs and other personal care products. The Governor signed this bill into law on 8 October 2015.	R							x			x		
California	Sales Tax Exemption on Recycling Equipment		AB 199 provides financial assistance in the form of sales tax exemption on equipment purchases to businesses that process or use recycled feedstock.								Technology	x	x	x		
California	California's Beverage Container Recycling Program		Consumers pay California Redemption Value (CRV) when they purchase beverages from a retailer and receive CRV refunds when they redeem the containers at a recycling center. Most beverages packaged in aluminum, glass, plastic and bi-metal containers are eligible for CRV.	R							Food/ beverage					
California	The 2018 California Ocean Litter Prevention Strategy: Addressing Marine Debris from Source to Sea (Strategy)		<p>The strategy centers on three main goals:</p> <ul style="list-style-type: none"> • Ocean Protection Council (OPC) Goal 1 – Land-based Ocean Litter: Protect marine ecosystems and the communities that rely on them by promoting policies to prevent litter from reaching the ocean. • OPC Goal 2 – Microplastics and Microfibers: Increase understanding of the scale and impact of microplastics and microfibers on the marine environment and develop solutions to address them. • OPC Goal 3 – Fishing and Aquaculture Gear: Reduce debris from fishing and aquaculture-related activities in the ocean. 	F							x					

PROPOSED POLICIES IN CALIFORNIA

Policy information				Sector							Circular economy business model					
Country or region	Policy name (English)	Policy name (national)	Description	Regulation or Framework	Automotive industry	Electronics industry	Steel industry	Other construction	Pulp and paper industry	Energy sector	Other / General	Circular supplies	Resource recovery	Product Life extension	Sharing platforms	Product as service
California	AB-1080 SB 54 California Circular Economy and Plastic Pollution Reduction Act (2019-2020)		This bill would enact the California Circular Economy and Plastic Pollution Reduction Act, which would require the department, before 1 January 2024, to adopt regulations that require covered entities to prioritize single-use plastic products and to source reduce single-use packaging at the same time.	R							Food/beverage, packaging, industry, manufacturing		x			
California	AB 792 – Mandatory Recycled Content in Plastic Bottles		Sets a series of graduated minimum recycled content levels for all plastic beverage containers, starting at 25% in 2021 and increasing incrementally thereafter.	R							Food/beverage, packaging, industry, manufacturing		x			
California	SB 724 – Bottle Bill buy-back centers		Sets short-term fix for California’s Beverage Container Recycling Program (the Bottle Bill) that would restore support for recycling infrastructure and provide CalRecycle with new incentives and authority to return recycling to unserved/ underserved communities across the state.	R							Food/beverage, packaging, industry, manufacturing		x			
California	AB 1583 – Recycling Market Development Act		Reauthorizes existing, and creates new, recycling infrastructure development programs, including sales tax exemptions, low-interest loans, and new incentive payment programs.	R							Food/beverage, packaging, industry, manufacturing		x			

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EXISTING POLICIES (EU AND CHINA) ADDED THIS YEAR

Policy information				Sector							Circular economy business model					
Country or region	Policy name (English)	Policy name (national)	Description	Regulation or Framework	Automotive industry	Electronics industry	Steel industry	Other construction	Pulp and paper industry	Energy sector	Other / General	Circular supplies	Resource recovery	Product Life extension	Sharing platforms	Product as service
Belgium (Flanders)	Building material-conscious in circularity	Materiaal-bewust bouwen in kringlopen	Creates a framework for cooperation between the government and the construction sector in order to further shape sustainable materials management from a circular economy viewpoint. The policy program encompasses joint efforts in five important themes, with fields that each have concrete ambitions and targets	F				x				x	x	x		x
Belgium (Flanders)	Pay as You Throw (PAYT) scheme		The scheme charges waste management for municipal waste fees depending on the type of waste and quantity. It adopts the “polluters pay principle” and makes disposal of residual and bulky waste more expensive than selectively collected waste. Municipalities set their own differentiated rates for various wastes based on the minimum tariffs agreed with the Public Waste Agency of Flanders (OVAM).	F							x	x	x	x		
Belgium (Flanders)	Public Procurement Plan	Vlaams plan overheid-sopdrachten	The plan aims to achieve 100% sustainable and 3% innovative public procurement by 2020, focusing purchases to close the material loop through reuse, refurbishment and use of recycled and bio-based materials.	F							x	x	x	x		x
Belgium (Flanders)	Summa – Center for Circular Economy	Part of Visie 2050, een lange termijn strategie voor Vlaanderen	The government set up the Circular Economy Support Center to streamline policy-relevant research in the context of the circular economy in Flanders. The center carries out scientific research into how the government can monitor, stimulate and contextualize the circular economy.	F							x	x	x	x	x	x

F= framework | R= regulation | X means that it concerns the corresponding column (eg for the first one the “x” in the circular supplies means that the policy is talking about circular supplies) | ◯ = could not be determined

EXISTING POLICIES (EU AND CHINA) ADDED THIS YEAR

Policy information				Sector							Circular economy business model					
Country or region	Policy name (English)	Policy name (national)	Description	Regulation or Framework	Automotive industry	Electronics industry	Steel industry	Other construction	Pulp and paper industry	Energy sector	Other / General	Circular supplies	Resource recovery	Product Life extension	Sharing platforms	Product as service
China	Notice of the Ministry of Finance and the State Administration of Taxation on Issuing the Catalogue of Value-Added Tax Preferences	财政部、国家税务总局关于印发《资源综合利用产品和劳务增值稅优惠目录》的通知（财税[2015] 78号）	This policy replaced the Circular on Adjustments of VAT Treatment to Products and Services Output through Comprehensive Utilization of Resources (caishui [2011] No.115) policy in 2015. China will reduce or eliminate value-added tax (VAT) burdens on enterprises that recycle resources used during production, in a bid to further promote the country's circular economy to make industrial manufacturing more environmentally friendly.	R							x	x	x			
China	National Sword Policy		China is enforcing its new National Sword Policy, which bans 24 types of solid waste, including various plastics and unsorted mixed papers, and sets a much tougher standard for contamination levels.	R							x	x	x			
Finland	Bio and Circular Finland	Vlaams plan overheid-sopdrachten	Business Finland, a Finnish government organization, has launched the Bio and Circular Finland program, which aims to make Finland a frontrunner in the circular economy. The expected volume of the four-year program is €300 million, of which the share of Business Finland's innovation funding is €150 million.	F							x	x	x	x	x	x
Finland	Finnish battery recycling research program		At the beginning of 2018, Business Finland launched a two-year batteries from Finland activation program, aiming to bring the country into the international battery market by improving the Finnish knowledge base for batteries and thereby attract leading battery manufacturers to invest in Finnish production. It also aims to support the development of new battery-related business concepts and Finnish battery recycling solutions.	F		x					Batteries	x	x			

F= framework | R= regulation | X means that it concerns the corresponding column (eg for the first one the "x" in the circular supplies means that the policy is talking about circular supplies) | ◯ = could not be determined

EXISTING POLICIES (EU AND CHINA) ADDED THIS YEAR

Policy information				Sector							Circular economy business model					
Country or region	Policy name (English)	Policy name (national)	Description	Regulation or Framework	Automotive industry	Electronics industry	Steel industry	Other construction	Pulp and paper industry	Energy sector	Other / General	Circular supplies	Resource recovery	Product Life extension	Sharing platforms	Product as service
France	French EPR Schemes		Extended producer responsibility (EPR) schemes for domestic and commercial furniture placed on the French market. The product scope of the regulation includes sofas, tables, seats, mattresses, bathroom furniture and office desks, among other items. Decree no. 2008-602 introduced EPR on textiles covering clothing, household linen and footwear (TLC in French) on 25 June 2008. Producers, distributors and importers of TLC are responsible for the end-of-life management of products placed on the French market.	R							Retail and commodity goods	x	x			
France	Government decree no. 2014-1482. Law on Planned Obsolescence		France has a law designed to prevent manufacturers from building planned obsolescence into their product designs. French manufacturers must tell consumers how long their appliances are intended to last. On pain of a fine of €15,000, manufacturers must also notify buyers about the period of time that spare parts will be available for each product, after its release date.	R		x						x	x			



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Germany	5-point BMU plan for less plastic and more recycling	Fragen und Antworten zum 5-Punkte-Plan des BMU für weniger Plastik und mehr Recycling	In November 2018, Minister Svenja Schulze of the Federal Environment Ministry (BMU) presented a 5-point plan with measures to reduce plastic use and increase recycling. These include a mixture of legal and voluntary measures to avoid unnecessary plastic. It also aims to strengthen alternatives to plastic use, such as drinking tap water instead of bottled water.	R							Plastics	x	x	x		x
Germany	End-of-life Vehicle Ordinance	Altfahrzeug-Verordnung (AltfahrzeugV)	It transposed EU Directive 2000/53/EC on end-of-life vehicles to Germany and covers cars, light utility vehicles and three-wheel motor vehicles. It requires automobile producers to take back scrap cars for free using a network, restricts the level of hazardous chemicals used in vehicles, sets a minimum reuse rate of 95% and recycling rate of 85%, and lays down the technical requirements for reusing and recycling scarp cars.	R								x	x	x		
Germany	Closed Substance Cycle Waste Management Act	(Kreislaufwirtschafts- und Abfallgesetz, KrW-/AbfG) – Excerpts	Established in 1996, this act applies to anyone that produces, markets or consumes goods and dictates that they are responsible for the materials' reuse, recycling or environmentally sound disposal.	F		x					x	x	x			
Germany	Innovative Waste Water Technology	Innovative Abwassertechnik	The Federal Environment Ministry (BMU) is setting up a new funding priority for innovative wastewater technology comprising three funding categories: recycling and provision of materials; further wastewater treatment; and saving, regulating and networking energy.													

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Italy	Action plan for the environmental sustainability of consumption of public administration (Green Public Procurement)		The plan, adopted by Ministerial Decree of 11 April 2008 (OJ No. 107 of 8 May 2008), has the goal of maximizing the dissemination of green public procurement among contracting authorities in order to make it express its full potential in terms of environmental, economic and industrial sectors.	F							X	X	X	X		
Italy	Italian Circular Economy Stakeholder Platform		The Italian Circular Economy Stakeholder Platform (ICESP) is the mirror initiative launched at the national level by the National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) – the only Italian member of the European Circular Economy Stakeholder Platform's Coordination body. The ICESP acts through six working groups: 1) Research and eco-innovation, 2) Policy and governance, 3) Measuring the circular economy, 4) Sustainable and circular design, production, distribution and consumption, 5) Cities and territory, 6) Good practices.	F						X					X	
Luxembourg	Climate pact	Pacte Climat – L'économie circulaire dans ma commune	The Grand Duchy of Luxembourg's Ministry of Sustainable Development and Infrastructure set up the Climate Pact. In 2018, it added specific measures for a transition to a circular economy, including: planning of demountable or modular buildings, promotion of the product-as-a-service model, procurement of cradle-to-cradle certified material, sharing economy initiatives, use of renewable sources within local circuits, citizens' co-creation initiatives.	F							X	X	X	X	X	X
Netherlands	The Netherlands Circular in 2050 Strategy		The Dutch government has set targets to reach a circular economy by 2050 and identified sectors that should become circular first.	F	X	X	X	X	X	X	X	X	X	X	X	X

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Portugal	Portugal: Green Growth Commitment (2014-2016)	Crescimento Verde	The Portuguese government is embarking on a green growth agenda that incorporates circular economy policies and targets across sectors, including construction, industry and waste management. The government developed the Green Growth Commitment in collaboration with 100 organizations. It represents a long-term economic strategy for Portugal to plot a course to recovery since the 2007-08 financial crisis.	F			x	x			Waste management	x	x	x		x
Spain	Local Circular Economy Strategy of the FEMP (Spanish Federation of Municipalities and Provinces)	Estrategia Local de Economía Circular de la FEMP	Spain's Local Circular Economy Strategy is a commitment to Spanish cities for the circular economy inspired by Europe-wide commitments. The strategic axes of the Local Economy Circular Strategy Model of the FEMP bring together a total of 25 measures, structured in four major areas: minimization of natural resources, management of water consumption, sustainability of urban spaces and spaces and healthy behaviors.	F			x	x			x	x	x	x		x
Spain	Catalonia Green Circular Economy	Economia Verda Circular	In 2015, the region launched a strategic plan to increase efforts to improve the consistency of regional programs favoring circular and sustainable economies. The plan defines key strategic axes, in particular the generation of demand and creation of new markets, improvements in access to funding, the promotion of R&D, support to internationalization and the promotion of entrepreneurship.	F							x	x	x	x		x
Spain	Spanish Science and Technology and Innovation Strategy (2013-2020)		The Spanish Science and Technology and Innovation Strategy is a framework instrument to achieve the general objectives in 2013-2020. The strategy highlights eight national challenges, of which two are linked to eco-innovation challenges: secure, sustainable and clean energy; and climate change and the efficient use of resources and raw materials.	F							x	x	x	x		x
Spain	Catalan ecodesign strategy	Estrategia catalana de ecodiseño, para una economía circular y ecoinnovadora	Achieving the objective of a competitive and sustainable economy over time requires taking advantage of the tools and instruments that allow companies to introduce circularity in quality products and services that are efficient, suitable for use, environmentally correct and socially responsible at the same time.	F							x	x	x	x		x

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European Union	Circular Economy Package		Legislative package including economic measures and regulation. Focuses on waste but also covers design, production, consumption and secondary materials	F							x	x	x	x	x	x
European Union	Circular Economy Stakeholder platform		Economic measures and financing to support research & innovation and foster the transition. Includes funding under H2020 and LIFE, initiatives by the EIB and the formation of a circular economy financing expert group	F							x	x	x	x	x	x
European Union	Plastics strategy		The plastics strategy targets dependence on virgin fossil feedstock, recycling and reuse, and leakage into the environment.	F							x	x	x			
European Union	Monitoring framework for the circular economy		This is a monitoring framework giving guidance on how to monitor the progress on the circular economy by country.	F							x	x	x	x	x	x

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European Union	2020 package, 2030 framework, 2050 low-carbon economy		These are binding legislation (2020 package) and medium- to long-term energy and climate targets to decarbonize the European economy.	R							x	x	x	x	x	x
European Union	Waste Framework Directive 2008/98/EC		Sets concepts and principles related to waste management, introduces a management hierarchy (prevention; preparing for re-use; recycling; other recovery; and disposal), includes definitions for by-products and end-of-waste, establishes rules to determine when a secondary raw material should no longer be legally considered as waste, and introduces 'extended producer responsibility' (EPR) as a voluntary approach that may be adopted by Member States.	R							x		x			

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European Union	Construction Product Regulation		Aims to establish harmonized rules on how to express the circular performance of construction products. It makes reliable information available to professionals, public authorities, and consumers, so they can compare the performance of products from different manufacturers in different countries.	R			X	X				X	X			
European Union	LEVELs		Voluntary reporting framework to improve the sustainability of buildings leading to a common EU approach to the assessment of environmental performance in the built environment. Aiming to raise awareness of, and demand for, better buildings - among the general public, developers and public procurement offices; improving knowledge of resource efficiency in the built environment to support better decision making.	F			X	X				X	X			
European Union	Ecolabel Regulation		Voluntary environmental labeling scheme to enable consumers to distinguish products which have a lower environmental impact than other products.	F							X	X	X			
European Union	Green Public Procurement		Voluntary instrument developed by the EU in order to incentivize public authorities to purchase products with a reduced environmental impact throughout their life cycle by introducing clear and verifiable environmental criteria for products and services in the public procurement process.	F							X	X	X			

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European Union	WEEE		The Directive aims to prevent or reduce the negative environmental effects resulting from the generation and management of Waste Electrical and Electronic Equipment (WEEE) and from resource use. Its key purpose is to contribute to sustainable production and consumption by, as a first priority, the prevention of WEEE and, in addition, by the re-use, recycling and other forms of recovery of such wastes.	R		x							x			
European Union	Industrial Emissions Directive		Regulates the environmental impact resulting from the emissions of industrial processes to air, water and land. The Directive aims to address the entire environmental impacts of the installation, including emissions to air, water and land, generation of waste and noise, use of energy and raw materials, prevention of accidents, and site closure.	R							x	x				

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Belgium (Flanders)	Materials Decree	Materialen decreet	The Materials Decree provides a basis for closing of the materials cycles in Flanders. The Materials Decree provides a definition for material and waste. In addition, they make a green purchasing policy possible for the government and it initiates a partnership between companies, knowledge institutions, civil society organizations and government agencies (Plan C). The decree also stops the export of unsorted waste to foreign countries.	R	x	x	x	x	x	x	x	x	x			
Belgium (Flanders)	Building material-conscious in circularity	Materiaal-bewust bouwen in kringlopen	The new program creates a framework for the cooperation between the government and the construction sector to further shape sustainable materials management from circular economy viewpoint. The policy program encompasses joint efforts in five important themes with fields that each have concrete ambitions and targets.	F				x				x	x	x		
Belgium (Flanders)	Flanders circular	Vlaanderen circulair	Flanders circular is a public-private partnership to connect and inspire various parties to move into the circular economy. The initial three focus themes are: circular city, circular business strategies, circular purchasing.	F	x	x	x	x	x	x	x	o	o	o	o	o
Belgium (Flanders)	Vision 2050, a long-term strategy for Flanders.	Visie 2050, een lange termijn strategie voor Vlaanderen	Within the 2050 vision of the Flemish government, circular economy is one of the seven transition priorities. The 2050 vision is used as a framework for development of all other policy.	F	x	x	x	x	x	x	x	x	x	x	x	x

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Belgium (Flanders)	Green deals	Green Deals	A Green Deal is a voluntary agreement between the Flemish government and (private) partners to start a sustainable project. The green deal provides communication, government support, facilitation and a steering committee to improve the project success.	F	x					x	xx	x			x	
Belgium (Flanders)	Circulair purchasing	Circulair Aankopen	Several Flemish organizations work together to increase the circularity of purchasing of their products. The Green Deal is a learning network where knowledge, expertise and experiences are shared.	F							x	x				

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Belgium (Flanders)	Recycling policy	Recyclage van afval	The task of recycling consumer and small waste flows is divided over various organizations in Flanders and Wallonia. Some industry associations are responsible for the collection of the end-use of their own products, but for other recycling purposes (semi-)governmental bodies are established.	F	o	o	o	o	o	o	o		x			
Belgium (Flanders)	Circular economy target	Visie 2050, een lange termijn strategie voor Vlaanderen	The Flemish government has set itself a target to be fully circular in 2050. This includes both material flows, as well as energy, water, food and space.	F	x	x	x	x	x	x	x	x	x	x	x	x
Belgium (Wallonia)	Recycling policy		The task of recycling consumer and small waste flows is divided over various organizations in Flanders and Wallonia. Some industry associations are responsible for the collection of the end-use of their own products, but for other recycling purposes (semi-)governmental bodies are established.	F	o	o	o	o	o	o	o		x			
Belgium (Wallonia)	Wallonia Waste-Resource Plan	Plan Wallon des déchets resources	The Wallion Waste-Resource Plan identifies key sectors, measures and actions to reduce waste production and increase recycling and reuse of materials.	F	x	x	x	x	x	x	x	x	x	o		o
Belgium (Wallonia)	First sustainable strategy Wallonia	Première stratégie wallonne de développement durable	The first sustainable development strategy of Wallonia focusses on five main challenges: energy transition, demographic evolution, restoration and protection of biodiversity, climate change and an increase in social inequality.	F												
Belgium (Wallonia)	Second sustainable strategy Wallonia	Developpement Durable 2e stratégie Wallonne	The second sustainable development strategy is an update of the previous strategy, aiming to provide a vision, framework and guidelines for policy implementation on sustainable development topics. These include next to energy, materials, water, demographics as well as social issues.	F												

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Belgium (Wallonia)	Sustainable Public Purchase policy	Achats publics responsables	In 2017, the Walloon government adopted its second Action Plan for responsible (sustainable) public purchases.	F												
Belgium (Wallonia)	Environment/Employment Alliance	L'Alliance Emploi-Environnement	The Environment/Employment Alliance is a public/private platform to mobilize all the stakeholders (public services, citizens, businesses) around actions in order to promote and improve sustainable construction and renovation of buildings.	F				X				o	o	o	o	o
Belgium (Wallonia)	Action plan for a more sustainable Walloon Public Service	Plan de développement durable		F												
Belgium (Wallonia)	Advisory units		The Walloon government instigated an independent sustainable development advisory unit to consult the Government on compliance with sustainable development principles of projects and legislative proposals.		x	x	x	x	x	x	x	o	o	o	o	o
Belgium (Wallonia)	Wallonia Green Cluster	GreenWin	A cluster of about 150 companies, research institutions and universities work together in Wallonia on circular economy targets. Companies and researchers collaborate to develop new eco-innovation projects that should help improving the circular economy and increase green economic growth.	F	o	o	o	o	o	o	o	o	o	o	o	o
China	Several Opinions of the State Council on Speeding up the Development of Circular Economy	国务院关于加快发展循环经济的若干意见	A concept note from the State Council to urge various government departments / ministries to develop CE-related policy guidance, laws and technical document. It also notes what the overall goal, principles, and priorities should be when developing these policies.	F		x		x		x	x	x	x			

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China	Circular Economy Promotion Law of the People's Republic of China	中华人民共和国循环经济促进法	The law sets the legal framework to pin down impact reduction, recycling and resource optimization as the core principles for circular economy and future development. It includes mandates for developing a national circular economy development plan, developing prioritized & prohibited product lists, adhering to CE principles in various industries, and providing financial incentives for CE initiatives.	F			x	x	x	x	x	x	x			
China	Environmental Protection Guidelines for Development of Circular Economy of Steel Industry	钢铁工业发展循环经济环境保护导则	The guideline elaborates CE concepts in the industry context. It shortlists the key measures & technologies the industry could take in different production stages to optimize resource use. It also establishes 11 indicators on resource use and recycling as the guidance for CE performance in the industry.	F			x					x	x			
China	Environmental Protection Guide for Developing Circular Economy in Aluminum Industry	铝工业发展循环经济环境保护导则	The guideline elaborates CE concepts in the industry context. It shortlists the key measures & technologies the industry could take in different production stages to optimize resource use. It also establishes 5 indicators on resource use and recycling as the guidance for CE performance in the industry.	F							x	x	x			
China	Notice about Carrying out the Experts Activity of Circular Economy	关于开展循环经济专家行活动的通知	This notice calls for the establishment of an expert group on circular economy to consolidate expertise in this area and provide technical support to assess existing pilot projects, contribute to the development of national circular economy strategy and prepare promotion strategy.	F							x					

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China	Notice about the Investment and Financing Policy to Support the Development of Circular Economy	关于支持循环经济发展的投融资政策措施意见的通知	It encourages provinces to incorporate CE as the core principles for regional development and planning within their 12th Five-Year-Plan, including the use of resource-based indicators for performance measurement. It also identifies financial measures that could encourage circular economy, such as increase in water price and emission fees, inclusion of CE elements in the green finance catalog for preferential lending, issuance of green bonds, leveraging international mechanisms like CDM, etc..	F	x			x			x	x	x			

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China	Notice about Promulgating the "Guidance on Drawing up the Development Plan of Circular Economy"	关于印发《循环经济发展规划编制指南》的通知	It outlines the framework and key elements for local government to develop their CE Development Plan, for example the overall requirement and structure for such plans. In particular, its recommended structure includes overview of local situation, the needs, advantages and limitations of CE, the guiding principles and objectives of CE development, key implementation measures, spatial planning, and priority region, projects and technologies, implementation results analysis, risk management / insurance measures.	F	x			x			x		x			
China	Development Strategy and Recent Action Plan of Circular Economy	循环经济发展战略及近期行动计划	It outlines the national CE strategy and provides guidance for local government to implement. It covers the core principles and objectives of CE, implementation / policy priorities for 11 industrial sectors (i.e. coal, power generation, steel, non-ferrous metal, petroleum, chemical, construction, paper & pulp, food, textile and industrial park), 5 agricultural sectors (i.e. planting, forestry, ranging, fishery, agrichemical), and 5 service sectors (i.e. tourism, communication, retail, catering, and logistics). It also identifies potential economic incentives, monitoring & management mechanisms to ensure effective implementation.	F			x	x	x	x	x	x	x			

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China	Plan for Promotion of Circular Economy in 2015	2015 年循环经济推进计划	It elaborates the tasks and responsible government body for implementation based on "Development Strategy and Recent Action Plan of Circular Economy." It outlines tasks in four main areas -- accelerate the development of CE sector system, roll out CE industrial park and regional CE development, promote CE at the civil level, promote green life style, strengthen supporting and monitoring mechanisms.	F	x	x		x			x	x	x			
China	Several Opinions of the State Council on Speeding up the Development of Circular Economy	关于加快发展农业循环经济的指导意见			x	x	x	x	x	x	x	x	x			
China	Notice of the State Council on Circular Economy Indicator System	关于印发循环经济指标体系的通知	It shortlists a total of 11 indicators as the reporting metrics on CE, focusing on resource output efficiency, resource recycling & reuse, recycling & reuse sectors. These metrics are mainly for policy makers' reference on planning and reporting. It also provides the methodology for calculating these indicators.	F	x	x	x	x		x	x	x	x		x	
China	Circular Development and Leading Action	循环发展引领行动	Guidance on implementing CE as proposed in China's 13th Five-Year Plan, jointly issued by 14 ministries. It updated the four main objectives for CE as developing green CE industries, incorporating CE into city development, establish protection scheme for resources, and incorporating green life style.	F												

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Finland	Leading the cycle – Finnish road map to a circular economy 2016–2025	Kierrolla kärkeen – Suomen tiekartta kiertotalouteen 2016–2025	Finland’s circular economy road map describes the concrete actions that can accelerate the transfer to a competitive circular economy in Finland. The road map highlights best practices and pilots that can be easily replicated and provide added value on a national scale, towards the goal of becoming global leader in circular economy by 2025	F					x		x	x	x	x	x	x

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Finland	Beverage Packaging Tax & Refund System	Juomapakkausvero	Started in 1996, the deposit refund system gradually expands from refillable glass bottles to metal cans, one-way PET bottles, and one-way glass bottles. There is a beverage packaging tax of EUR 0.51 per liter, but beverage manufacturers and importers are exempted if they join the deposit-based return system by paying fees for processing and receive return packages. The system is run by Palpa, which is a non-profit organization owned equally by retailers and the beverage industry.	R							x	x	x			
Finland	Action Plan for a Circular Economy	Kiertotalouden toimenpideohjelma	This action plan presents measures applied by the Government and Sitra, the Finnish Innovation Fund, to promote the realization of the circular economy during this Government term.	F							x				x	x
Finland	From Recycling to a Circular Economy: National Waste Plan to 2023	Kierrätyksestä kiertotalouteen: Valtakunnallinen jätesuunnitelma vuoteen 2023	The National Waste Plan is a strategic plan adopted by the Government laying down the objectives and measures for waste management and prevention in Finland to 2023. The four key areas in the National Waste Plan are: construction and demolition waste, biodegradable waste, municipal waste, and waste electrical and electronic equipment. Detailed targets have been set for these key areas and measures are presented to reach the targets.	F		x		x			x	x	x	x	x	x
Finland	Government Decree on Landfills (331/2013)	Valtioneuvoston asetus kaatopaikoista	The legislation sets the limit for organic content of municipal, construction & demolition waste used in backfilling operations. It banned any disposal of non-hazardous waste consisting of more than 10% organic matter to the landfill.	R	x	x	x	x	x	x						

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Finland	The Finnish Bio Economy Strategy	Suomen biotalousstrategia	The strategy is to set up priorities and performance indicators for actions towards establishing a competitive operating environment for the bio economy, new business from bio economy, a strong bio economy competence base, and accessibility and sustainability of biomasses.	F				x	x	x	x	x	x		x	x
Finland	Government Decree on the Recovery of Certain Wastes in Earth Construction (843/2017)	Statsrådets förordning om återvinning av vissa avfall i markbyggnad	The regulation promotes the use of certain waste types and defines certain recovery activities (i.e. material types, project types) that do not require environmental permits.	R				x					x			
Finland	Waste Decree (179/2012)	Valtioneuvoston asetus jätteistä	It sets further requirements for building projects to ensure reclaiming and reuse of all usable materials to minimize waste and the harmfulness of the waste.	R				x					x			
Finland	Government Decree on the separate collection and recovery of discarded tyres (527/2013)	Valtioneuvoston asetus käytöstä poistettujen renkaiden erilliskeräyksestä ja hyödyntämisestä	This Decree lays down provisions on the obligation of the producer of tires to organize the separate collection, preparation for re-use, recycling and other recovery of discarded tires.	R							x		x			
Finland	Waste Tax Act (1126/2010)	Jätevero/Avfallskatt	A tax of €70 per ton of waste is imposed on all waste disposed at landfill sites, exempting waste with no feasible treatment and hazardous waste.	R	x	x	x	x	x	x	x		x			
Finland	KEINO: Competence Centre for Sustainable and Innovative Public Procurement	Kestävien ja innovatiivisten julkisten hankintojen verkostomainen osaamiskeskus	KEINO is a network-based Competence Centre founded to increase sustainable and innovative public procurement, improve the effectiveness and quality of public procurement and public services.	F	x			x				x				

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Finland	Green Deal Agreements	Green deal -sopimukset	Green Deal is a voluntary agreement between the state and the business sector. The aim is to promote the sustainable development goals. The parties that commit to the agreement agree on a shared goal, measures to achieve this, and monitoring. The agreement can be used as a steering instrument instead of legislation.	F	x	x	x	x	x	x	x	x	x	x	x	x
France	Roadmap for circular economy	La feuille de route pour l'économie circulaire (FREC)	In February 2018, the government presented the first draft of the roadmap for circular economy that tackles waste management, product eco-conception, consumption, the financial means needed for the transition towards the circular economy, and the stakeholders involved.	F							x	x	x	x	x	x

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France	Law for the Social and Solidarity Economy	La loi Economie sociale et solidaire	The Law for the Social and Solidarity Economy, voted in 2014, fully recognizes the value of the social and solidarity economy, that was beforehand unlegislated. It also sets the basis for specific financing for the associations, cooperatives, mutual funds, foundations and companies that have decided to set a public utility objective and adopt the principles of the social and solidarity economy. This law is significant, as a number of the social and solidarity economy stakeholders are committed in environment-friendly activities, which can involve circular economy.	R							x		x			
France	Energy Transition for Green Growth Act	Loi de transition énergétique pour la croissance verte	The Energy Transition for Green Growth Act was announced in 2015. It clearly states that one of the goals is to reduce by half the amount of landfilled waste by 2025, by disconnecting economic growth from raw material consumption and by developing the recycling and the upcycling industries.	F							x		x			
France	Eco-tech competitiveness clusters	Le réseau des Pôles EcoTechnologies	France has 'competitiveness clusters', which bring together large and small companies, research labs and academia to work together in specific regions on innovative collaborative projects. 14 out of 71 of these clusters are part of the Ecotech Network, which uses the private-public innovation partnership model of the clusters to develop sustainable solutions in a range of environmental areas, including secondary raw materials and the circular economy.	F							x	x	x			

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France	New Industrial France and Investments for the Future Programme	La Nouvelle France Industrielle (NFI)	In May 2015 the government announced nine "French Industrial Solutions", which conformed to France's industrial policy priorities. These include are New Resources (new bio-based and recycled materials for industrial productions), Sustainable Cities (smart grids, building renovation, circular economy), Eco Mobility and Transport of Tomorrow.	F	x	x	x	x	x		x	x				
France	Green Tech Incubator	La GreenTech verte	In February 2016, the Ministries in charge of the Environment and of the Digital Economy launched a call for new green technology projects including circular economy.	F							x	x				



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France	Responsible Purchasing Promotion Scheme (RPPS)	Schéma De Promotion Des Achats Responsables	The Responsible Purchasing Promotion Scheme (RPPS) of the Nantes region included the creation 11 procurement 'Action Sheets', one of which covered the circular economy.	F							x	x				
France	Eco-innovation support programme	Eco conception	An eco-innovation support program has been introduced by the Auvergne regions Chamber of Commerce and Industry to provide eco-innovation expertise and support services to companies wanting to reduce the environmental impacts of their products.	F							x	x				
France	Eco-Innovation Factory	Eco-Innovation Factory	The Eco Innovation Factory is a mentoring program in Western France aimed at eco-innovation projects in their earliest stages including projects related to circular economy.	F							x	x	x			
France	Les engagements pour la croissance verte	Les engagements pour la croissance verte	Established for the 3 years period, the « engagements pour la croissance verte » have two objectives: (1) Lift the barriers identified by economic actors, which are linked to the innovation for the ecological transition. (2) Value innovative projects in the circular economy to make sure of their dissemination across the area. Progress made through green growth have to benefit to all stakeholders active in the area.	F				x			x		x			

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Germany	2012 Circular Economy Act	Kreislaufwirtschaftsgesetz	The Kreislaufwirtschaftsgesetz (KrWG) is the central federal law of the German waste legislation. The purpose of the law is to promote the circular economy for the protection of natural resources and to ensure the protection of humans and the environment in the production and management of waste, and in particular to promote the recycling and other recycling of waste.	R	x	x	x	x	x	x			x			
Germany	2016 Resource Efficiency Program Phase II	Deutsches	The German Resource Efficiency Program was updated in 2016 with some relevant policy approaches for promoting a circular economy and meeting the goal of doubling resource productivity by 2020 compared to 1994. The new program 2016-2019 encompasses in total 116 different proposals for resource efficiency measures.	F	x	x	x	x	x	x			x	x		
Germany	National Programme of Sustainable Consumption	Nationales Programm für nachhaltigen Konsum	The National Programme for Sustainable Consumption aims to help consumers better understand the impacts of their consumption. It has an explicit aim to pay greater attention to lifecycle-based principles and practices in eco-design, in addition to promoting credible and ambitious labels, promoting sustainable public procurement and encouraging social innovation.	F		x					x	x				
Germany	New Packaging Law	Neues Verpackungsgesetz	A new packaging law, to enter into force in January 2019, raises recycling targets and aims to reduce packaging waste.	R		x			x			x	x			

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Germany	Sustainable Development Strategy	Deutsche Nachhaltigkeitsstrategie und ihre Indikatoren	The updated Sustainable Development Strategy outlines how Germany shall meet the goals of the international Sustainable Development Goals. It contains two targets related to SDG Goal 12 (to ensure sustainable consumption and production patterns) related to products. First the market share of goods independently verified by sustainability labelling schemes should reach 34% by 2030. Secondly, Germany has set a target to increase EMAS eco-management schemes to 5,000 organization locations by 2030.	F		x						x	x			
Italy	Emilia Romagna regional bill 16/2015	Promuovere un'economia circolare: le politiche e le strategie della LR 16/2015 e del Piano regionale per la gestione dei Rifiuti	Emilia Romagna was the first region in Italy to approve a regional law to sustain circular economy, waste prevention, reuse and separate collection. It is a consolidation of recycling strategy.	R							x	x	x			
Italy	States General of the Green Economy	Stati generali della Green Economy	A multi-stakeholder annual program of working groups meetings and events, culminating in a national presentation event. Promoted by the National Council of the green economy and composed of 66 business organizations in collaboration with the Ministry of Environment and the Ministry of Economic Development. It is a programmatic platform promoting green economy through analysis of opportunities and obstacles and policies needed to improve performance of certain strategic sectors.	F							x	x	x	x	x	x

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Italy	Symbiosis Users Network (SUN)	Symbiosis Users Network (SUN)	An Italian industrial symbiosis network aimed at encouraging collaboration between different public and private users with the intention of promoting industrial symbiosis as instrument of eco-innovation and transition to a circular economy. The network is voluntary-based, and has as participants the Ministry of Environment, the Ministry of Economic Development, Confindustria, Unioncamere, Territorial Cohesion Agency, universities, and other relevant stakeholders.	F							x	x	x			
Italy	Start to be Circular	Start to be Circular	Start to be Circular is an initiative in Milan created to promote the transition to sustainable growth through innovative business initiatives. It offers prize funding for promising entrepreneurial initiatives. It is promoted by the Bracco Foundation, the Giuseppina Mai Foundation of Confindustria and Banca Prossima.	F							x				x	x

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Italy	Towards a Model of Circular Economy for Italy - Overview and Strategic Framework	Verso un modello di economia circolare per l'Italia	Towards a Model of Circular Economy for Italy - Overview and Strategic Framework" is a document that defines Italy's strategic positioning on the issue in line with the commitments adopted under the Paris Agreement, UN Agenda 2030, G7 Communiqué and within EU. The document calls for a "change of paradigm" for Italy's economy, for a new way to consume, produce and do business. There is a need for a new industrial policy aimed at sustainability and innovation capable of increasing the competitiveness of products and manufacturing. Considering the importance of the document, the Italian government decided to collect the contributions of all institutions, firms, experts and citizens who deal with the issue to develop a document that is the result of a shared and participatory process	F							x	x	x	x	x	x
Luxembourg	Circular economy test town Wiltz	Charte pour l'économie circulaire - Wiltz	Wiltz, a small town in northern Luxembourg, has been designated to be a circular economy test ground. This is in line with the government's initiative to promote sustainability. The town of 5500 inhabitants will host a number of pilot projects related to the circular economy. For example, a repair café, an 3D printing experimentation lab and training of circular economy principles in high schools.	F	o	o	o	o	o	o	x	x	x		x	

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Luxembourg	Third industrial revolution	troisième révolution industrielle	The Third Industrial Revolution is a cross-sectoral governmental strategy to incorporate new developments and trends in all sectors. One of the key aspects is the circular economy, which is integrated as horizontal axis into 6 separate pillars: food, industry, building, energy, mobility and finance.	F	x	x	x	x		x	x	o	o	o	o	o
Luxembourg	Inter-ministerial committee on Circular Economy		An inter-ministerial committee was created to foster the cooperation between public actors and work together on the circular economy. The committee established four working groups focusing on opportunities and barriers in the areas of: finance and regulation, new business models, products and services and public procurement and education.	F	x	x	x	x	x	x	x	o	o	o	o	o
Luxembourg	ERA-Net ECO-Innova	ERA-Net ECO-Innova	ERA-Net Eco-Innova is a collaborative grant, funding transnational and multidisciplinary R&D projects, which consider social, environmental and technological issues.	F	x	x	x	x	x	x	x	o	o	o	o	o
Luxembourg	NeoBuild competence center	NeoBuild	NeoBuild is a competence center focusing on the building sector. It supports innovation and green technologies in the building sector. One of the key aspects is the creation of living labs, allowing new products to be tested in real life conditions.	F				x				o	o	o	o	o
Luxembourg	MyEnergy governmental agency	Myenergy	The governmental agency MyEnergy is created to promote energy savings, CO2 emission reductions and implementation of circular economy principles. It offers information and advice for both companies and households.	F	o	o	o	o	o	o	o	o	o	o	o	o

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Luxembourg	Fit4Circularity	Fit4Circularity	Co-funding of 50% for companies investing in developing a roadmap for their transition towards a circular economy.	F	x	x	x	x	x	x	x	x	x	x	x	x
Netherlands	Raw Materials Agreement/national agreement on circular economy	Grondstoffenakkoord	A public-private national agreement on having the Dutch economy operate on the basis of reusable raw materials. More than 180 parties signed the agreement, including the national government, provinces, municipalities, business communities and companies from various sectors (e.g. financial, chemicals, buildings) as well as NGO's. The National Raw Materials Agreement builds on the plan of the Cabinet presented in September 2016 for the transition to a circular economy. The signatories can now make concrete plans to accelerate this transition. Concrete plans on the subjects of biomass, food, plastics, manufacturing, construction and consumer goods will be completed within six months. These plans will set forth the steps to be taken to realize a full circular economy by 2050.	F	x	x	x	x	x	x	x	x	x			x

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Netherlands	Green Deals	Green Deals	A Green Deal is a mutual agreement or covenant under private law between a coalition of companies, civil society organizations and local and regional government. The deal defines the innovative initiative and the actions involved as clearly as possible (in quantitative aims or output, if possible) and it defines the input by the participants involved as clearly as possible. In the period between 2011 and 2014, 176 Green Deals were closed in the Netherlands, involving a total of 1,090 participants. Green Deals cover nine themes: energy, the bio-based economy, mobility, water, food, biodiversity, resources, construction and the climate.	F	x	x	x	x	x	x	x	x	x	x	x	x
Netherlands	Green Deal Take Back Chemicals	Take Back Chemicals	The Green Deal take Back Chemicals focusses on developing business models to increase sustainable and efficient use and reuse of chemical products. Although the end report was delivered in 2017, the companies will keep committing to improving and implementing the experiences.	F							x	x	x			
Netherlands	Green Deal Circlecity	Green Deal Cirkelstad	The Green Deal Cirkelstad focusses on closing the material loops for building materials in multiple cities	F			x	x				x				

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Netherlands	Green Deal Circulaire Gebouwen	Specific Green Deal	The Green Deal 'Circulaire gebouwen' focus on minimizing and reusing of raw materials during designing and exploitation of non-residential buildings. Part of the scope is looking at life extension and flexible function adjustments of buildings.	F			x	x				x		x		x
Netherlands	Circulaire purchasing 2.0 - from pilot to upscaling	Circulaire Inkoop 2.0 – van pilot naar opschaling	The Green Deal 'Circulaire inkoop 2.0' focusses on (semi-) governmental bodies and large corporates to make sure circularity is a key part of the purchasing efforts. The Green Deal is organized as a 'learning network' between different organizations.	F							x	x				
Netherlands	Top Sector Policies	Topsectoren	The Top Sector policies are economic growth and competitiveness programs for nine strategic sectors for the Dutch economy. They focus on innovation and creating new and better products, boosting economic growth and creating jobs. The government wants to further strengthen the Dutch international competitive position of these nine sectors.	F	x	x				x	x	x	x	x		x
Netherlands	Climate agreement	Klimaataakkoord	A national agreement with private sector, civil society organizations and subnational authorities to agree on required way to reach the targeted 49% emission reduction in 2030. The agreement should specify the measures and required efforts of each party to reach the goals.	F	x	x	x	x	x	x	x	x	x		x	x

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Netherlands	National waste management plan	Landelijk afvalbeheerplan (LAP3)	The policy framework describes the objective of the waste policy in the Netherlands and the policy for waste prevention and waste management. Topics dealt with in the policy framework are traditional waste activities such as collection, recycling, incineration, landfill and waste transport. Other topics are also discussed, such as the circular economy, the assessment of waste or no waste, monitoring and licensing and supervision.	F	x	x	x	x	x	x	x		x			x
Netherlands	Circular economy targets	Ambitie en doelen circulaire economie	The Dutch government has set targets for itself to reach a circular economy by 2050 and in addition identified sectors who should become circular first.	F	x	x	x	x	x	x	x	x	x	x	x	x
Netherlands	Concrete agreement	Betonakkoord	Agreements between government, clients, concrete producers and contractors about reusing concrete and reducing non-renewable feedstock for concrete production.	F				x				x	x			
Netherlands	Ban on free plastic bags	Verbod op gratis plastic tassen	The government banned the free handout of plastic bags with purchases to stimulate more circular products to be used, or to reuse earlier purchased plastic bags	R							x			x		
Netherlands	Higher taxes on incineration and landfilling	Afvalstoffenbelasting op verbranden en storten	Per 2019 the government will increase taxes on landfilling and incineration, reduce exceptions for this tax and institute a tax on export of waste.	R	x	x	x	x	x	x	x	x	x	x		
Netherlands	From waste to raw material	Van Afval Naar Grondstof (VANG)	From waste to material is a broad government program with nine operational objectives that encourage companies and individuals to waste and recycle or reuse raw materials.	F	x	x	x	x	x	x	x	x	x			

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Netherlands	Cabinet vision biomass 2030	Kabinetsvisie biomassa 2030	The strategic government vision focuses on both achieving policy goals (from which bio based and circular economy are part) and the contribution that biomass can make to an innovative, competitive economy	F	x				x	x		x				
Netherlands	Environment investment tax deductions	Milieu-investeringsaftrek (MIA) and Willekeurige afschrijving milieu-investeringen (Vamil)	Tax deduction for investments in environmental friendly technologies. The company can get a tax deduction of up to 36% of the investment. In addition, it is possible to write off the investments at a suitable time for the company itself.	R	x	x	x	x	x	x	x	x	x	x	o	o
Netherlands	Environmental Performance of Buildings	Milieuprestaatie gebouwen (MPG)	The Environmental Performance of Buildings requires building developers to calculate the environmental impact of the used buildings materials. This calculation is a requirement for new buildings, although the regulations are not yet strictly enforced.	R				x				x				
Portugal		Fundo Ambiental	The Portuguese Fundo Ambiental, which was created by the Decree Law n.º 42-A/2016, of August 12, replacing several other funding instruments, aims to support the implementation of environmental policies to pursue the sustainable development goals, to help achieve the national and international objectives, namely concerning climate change, water resources, waste management and nature and biodiversity conservation.	F							x		x			

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Portugal		Eco.nomia project	The project Eco.nomia (Ministry of Environment, 2017a), was launched by the Portuguese Government to raise awareness and build a circular economy community. The Eco.nomia website specifically aims to be a one-stop shop for organizations looking for further information on circular economy. There were also several sector-specific workshops to highlight the best circular economy examples and foster replication among the business community.	F							x				x	
Portugal		Plano de Ação para a Economia Circular	The Plano de Ação para a Economia Circular, which was approved by the end of 2017, establishes a clear action plan to foster the transition towards the circular economy in Portugal.	F							x	x	x	x	x	x
Slovenia	Roadmap towards a Circular Economy in Slovenia	Kažipot Prehoda V Krožno Gospodarstvo Slovenije	Slovenia CE roaThe first Slovenian Circular Economy Roadmap, authored by Circular Change and other consortia of partners, was published in May 2018. It aims to pave the way towards transitioning from a linear to a circular economy in Slovenia through an inclusive multi-stakeholder process.	F												

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Slovenia	Slovenia's Smart Specialisation Strategy Action Plan for the Transition to a Circular Economy	Strategija pametne specializacije	Smart specialisation is a platform for concentrating development investments in areas where Slovenia has the critical mass of knowledge, capacities and competences and where there is innovation potential for placing Slovenia within global markets and thus enhancing its recognizability.	F							X	X	X		X	X
Spain	Spanish Strategy on Circular Economy	Estrategia Española de Economía Circular	The Spanish Ministry of Agriculture and Fisheries, Food and environment started to draft the first Spanish Strategy on Circular Economy (Estrategia Española de Economía Circular) in March 2017, in order to promote the shift towards a model of circular economy in the country.	F	o	o	o	o	o	o	X	X	X			
Spain	Pact for a Circular Economy	Pacto por una Economía Circular en España	Related to Spain's strategy on Circular Economy is the Pact for a Circular Economy: the compromise of the economic and social agents 2018 – 2020 that was signed by 55 stakeholders in September 2017. The aim is to involve the most relevant economic and social agents of Spain in order to make the shift in the system. The strategy includes an action plan for the period 2018-2020 that will require an investment of 838,8 million euros. The 57% of the budget will be used in actions related with the reuse of waste water.	F							X		X			
Spain	PEMAR 2016-2022	PEMAR 2016-2022		F							X		X			
Spain	Spanish strategy of Bio economy Horizon 2030	Estrategia Española de Bioeconomía Horizonte 2030	This policy aims to promote economic activity and improve the competitiveness and sustainability of the productive sectors linked to the use of biologically-based resources, promoting the generation of knowledge and its use for the development and application of derived technologies, through collaboration within the science and technology system and between Spanish public and private entities.	F							X	X	X			

F= framework | R= regulation | X means that it concerns the corresponding column (eg for the first one the "x" in the circular supplies means that the policy is talking about circular supplies) | o = could not be determined

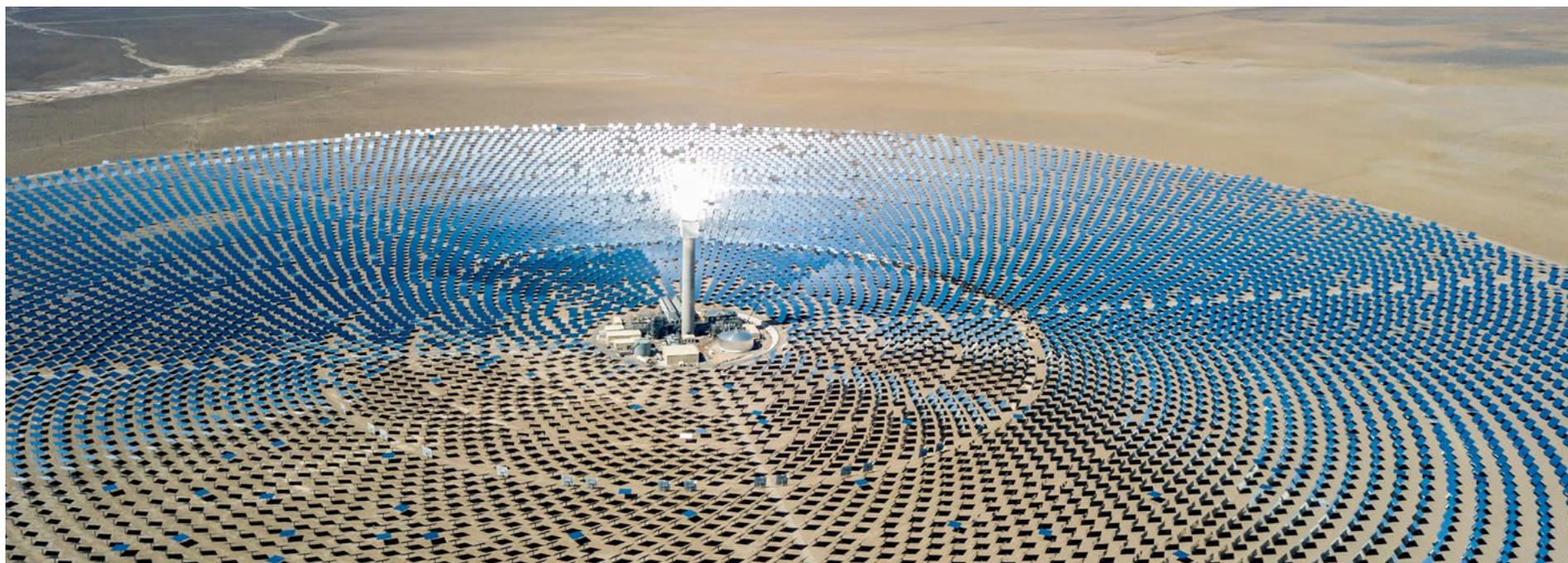
2018 POLICY ACTION BRIEF

Policy information				Sector							Circular economy business model					
Country or region	Policy name (English)	Policy name (national)	Description	Regulation or Framework	Automotive industry	Electronics industry	Steel industry	Other construction	Pulp and paper industry	Energy sector	Other / General	Circular supplies	Resource recovery	Product Life extension	Sharing platforms	Product as service
Slovenia	Slovenia's Smart Specialisation Strategy Action Plan for the Transition to a Circular Economy	Strategija pametne specializacije	Smart specialisation is a platform for concentrating development investments in areas where Slovenia has the critical mass of knowledge, capacities and competences and where there is innovation potential for placing Slovenia within global markets and thus enhancing its recognizability.	F							X	X	X		X	X
Spain	Spanish Strategy on Circular Economy	Estrategia Española de Economía Circular	The Spanish Ministry of Agriculture and Fisheries, Food and environment started to draft the first Spanish Strategy on Circular Economy (Estrategia Española de Economía Circular) in March 2017, in order to promote the shift towards a model of circular economy in the country.	F	o	o	o	o	o	o	X	X	X			
Spain	Pact for a Circular Economy	Pacto por una Economía Circular en España	Related to Spain's strategy on Circular Economy is the Pact for a Circular Economy: the compromise of the economic and social agents 2018 – 2020 that was signed by 55 stakeholders in September 2017. The aim is to involve the most relevant economic and social agents of Spain in order to make the shift in the system. The strategy includes an action plan for the period 2018-2020 that will require an investment of 838,8 million euros. The 57% of the budget will be used in actions related with the reuse of waste water.	F							X		X			
Spain	PEMAR 2016-2022	PEMAR 2016-2022		F							X		X			

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2018 POLICY ACTION BRIEF

Policy information				Sector							Circular economy business model					
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Spain	Spanish Strategy on Circular Economy	Estrategia Española de Economía Circular	The Spanish Ministry of Agriculture and Fisheries, Food and environment started to draft the first Spanish Strategy on Circular Economy (Estrategia Española de Economía Circular) in March 2017, in order to promote the shift towards a model of circular economy in the country.	F	o	o	o	o	o	o	X	X	X			
Spain	Pact for a Circular Economy	Pacto por una Economía Circular en España	Related to Spain's strategy on Circular Economy is the Pact for a Circular Economy: the compromise of the economic and social agents 2018 – 2020 that was signed by 55 stakeholders in September 2017. The aim is to involve the most relevant economic and social agents of Spain in order to make the shift in the system. The strategy includes an action plan for the period 2018-2020 that will require an investment of 838,8 million euros. The 57% of the budget will be used in actions related with the reuse of waste water.	F							X		X			
Spain	PEMAR 2016-2022	PEMAR 2016-2022		F							X		X			
Spain	Spanish strategy of Bio economy Horizon 2030	Estrategia Española de Bioeconomía Horizonte 2030	This policy aims to promote economic activity and improve the competitiveness and sustainability of the productive sectors linked to the use of biologically-based resources, promoting the generation of knowledge and its use for the development and application of derived technologies, through collaboration within the science and technology system and between Spanish public and private entities.	F							X	X	X			

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Spain	State Strategy for Green Infrastructure Connectivity and Ecological Restoration	Estrategia Estatal de Infraestructura Verde Conectividad y Restauración Ecológicas – EEIVCRE	This strategy wants to be a guide of objectives and recommendations to put an end to the fragmentation that exists in terms of visions of the weight that ecological restoration should have at different administrative levels.	F							X		X	X		
Sweden	Environmental code	Svenska miljöbalken	The Swedish Environmental code provides guidelines and requirements for environmental protection and is the backbone for additional regulation. The code focusses on 5 key topics: resource and land management, environmental quality standards, environmental impact statements, nature protection and the protection of flora and fauna.	F	X	X	X	X	X	X	X	X				
Sweden	Landfill tax & ban	Deponeringskatt	The landfill tax, introduced in 2000, charges waste disposal and municipalities for landfilling general waste. In addition, landfilling is banned for	R												
Sweden	RE:Source	RE:Source	RE:Source is a meeting place for stakeholders from the Swedish industry, waste management and research sectors to cooperate and apply for funding for their innovation projects. The RE:Source program is the first coordinated initiative to focus on the field of resource and waste management.	F	X	X	X	X	X	X	X	X	X			
Sweden	Innovation program circular and bio-based economy	Biobaserad samhällsekonomi	The Swedish government has setup up 5 innovation partnership programmes. Circular and bio-based economy is one of these programs. The purpose of this programme is to identify innovative solutions, approaches circular economy throughout the whole sector and industry, focus on actions and co-financing by business.	F												

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Sweden	Hydrogen steel funding	Fossilfritt stål stöd HYBRIT	The Swedish Energy Agency has provided funding for two pilots projects on hydrogen-based steelmaking to a consortium of SSAB, LKAB and Vattenfall. With 528 million SEK, this is the largest funding the Energy Agency has ever provided.	F			X					X	X			
Sweden	Bio Innovation platform	Bio Innovation	The Bio Innovation platform is a collaborative cooperation between government and industry to create a bio-economy in Sweden in 2050. The Strategic innovation program is financed by the Swedish Innovation Agency Vinnova, the Energy Agency and Formas, but also by stakeholders.	F	o	o	o	X	o	X	X	X				

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Endnotes

1. Government of Spain (2017). "Isabel García Tejerina inaugurates workshops on 'Spanish Circular Economy Strategy', together with European Commissioner, Karmenu Vella". Available at https://www.lamoncloa.gob.es/lang/en/gobierno/news/Paginas/2017/20170918_circular_economy.aspx.
2. See 30 new actions on the Sitra government site: <https://www.sitra.fi/en/cases/voluntary-agreements-promote-circular-economy-faster-legislation/>
3. Egel, Benjy (2018). "California now the world's fifth-largest economy, bigger than Britain". The Sacramento Bee. 4 May 2018. Available at <https://www.sacbee.com/news/business/article210466514.html>.
4. Longer term strategy development is underway in California with newly introduced bills related to the California Circular Economy and Plastic Pollution Reduction Act of 2019. These companion bills develop a comprehensive framework for reducing plastic pollution and reforming product packaging up to 2030. Others include ab 792 – Recycling: plastic containers: minimum recycled content and labeling, AB 724 – The California Beverage Container Recycling and Litter Reduction Act, and AB 1583 – The California Recycling Market Development Act.
5. Californians Against Waste (n.d.). "The Future of Recycling in California: Reinvesting in Market Development and Infrastructure; source reducing non-recyclables from the marketplace". Available at <https://www.cawrecycles.org/legislation>.
6. CalRecycle (2019). "National Sword and China's Restriction on the Import of Recyclable Material". Available at <https://www.calrecycle.ca.gov/Markets/NationalSword/>.
7. AB 1583 – The California Recycling Market Development Act will seek to create new incentives for recycling infrastructure development programs, including sales tax exemptions, low interest loans, and new incentive payment programs. AB 792 and 724 seek to increase recycling targets for all plastic beverage containers and expand facilities for recycling to underserved communities across the state.
8. Sitra (2018). "GBC Finland: KIRA-alan mahdollisuudet päästä kierrolla kärkeen". Available at <https://www.sitra.fi/artikkelit/gbc-finland-kira-alan-mahdollisuudet-paasta-kierrolla-karkeen/>.
9. Biomass, for example, based on plant life and agricultural residue can be used as another fuel alternative to generate bioenergy.
10. Food and Agriculture Organization of the United Nations (FAO) (2019). Towards Sustainable Bioeconomy: Lessons learned from case studies. Available at <http://www.fao.org/3/ca4352en/ca4352en.pdf>.

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The future of business is circular, and there's no room for waste in it. Factor 10, WBCSD's new circular economy program, aims to bring circularity into heart of business leadership and practice.

Our goal is to build a critical mass of engagement within and across business to move the circular Economy to deliver and scale solutions needed to build a sustainable world. In order to reach Vision 2050 in which not a particle of waste exists, eco-efficiency of materials must improve by a factor of 10. This target was previously referenced by the Factor10 Institute in 1994 when they called for the ten-fold improvement in resource efficiency.

Learn more about Factor10 at <https://www.wbcسد.org/Programs/Energy-Circular-Economy/Factor-10>

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