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Circular Economy Country-Specific Report

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CONTENT

CONTENT	2
1 Introduction	3
2 An Overview of Circular Economy	3
2.1. Circular Economy in the European Union (EU)	3
2.2. Circular Economy in Turkey	4
2.3 Legislation: general overview and main aspects	7
3 National Performance	8
3.1. Regulation Related to Circular Economy	8
3.2. National Initiatives	9
4 Findings	12
5 Concluding Notes	14

1 Introduction

Each year, 90 billion tons of primary materials are extracted and used globally, with only 8.6 percent recycled.^{1,2} While this is unsustainable, the nature of the mainstream 'make-take-dispose' consumer model has significant detrimental impacts on human health, climate change, and the environment.³

A 'circular economy' has been identified as a major (up to \$4.5 trillion: World Business Council for Sustainable Development) commercial opportunity and could support the development of new industries and jobs, reducing greenhouse gas emissions and increasing efficient use of natural resources (including energy, water, and materials).⁴

A circular economy is a new way of looking at the relations between markets, customers, and natural resources. Its purpose is to change the existing economic model, which is based on the approach of "take, make, and dispose", and it utilizes the power of innovative business models and technology.⁵

By and large, today's manufacturing takes raw materials from the environment and turns them into new products, which are then discarded into the environment. It is a linear process with a beginning and an end. In this system, limited raw materials eventually run out. Waste accumulates, either incurring expenses related to disposal or else pollution. Additionally, manufacturing processes are often inefficient, leading to further waste of natural resources.⁶ In a circular economy, however, materials for new products come from old products. As much as possible, everything is reused, re-manufactured, or as a last resort, recycled back into a raw material or used as a source of energy.⁷

2 An Overview of Circular Economy

2.1. Circular Economy in the European Union (EU)

The European Commission has adopted a new Circular Economy Action Plan (CEAP) as an agenda for sustainable growth in the EU. The European Commission reports that the new plan "aims to make the EU's economy fit for a green future, strengthen its competitiveness while protecting the environment and give new rights to "circular economy, to ensure that resources used are kept in the EU economy for as long as possible." The growing concerns in the EU have led to many environmental legislations and programs since the start of the millennium. The latest one binding the economy and energy within the scope of the low-carbon world is the EU Circular Economy. In December 2015, the European Commission published its Circular Economy Package that will enhance the strategy to protect the environment comprising an action plan with 54 concrete actions, a timetable, and a monitoring section.⁸

The European Commission published a new EU Circular Economy Action Plan intending to make the economy fit for a green future and strengthen the EU's competitiveness while protecting the environment and giving new rights to consumers on 11th March 2020, as part of the Communication on a European Green Deal from December 2019. In total, the action plan has 35 legislative and non-legislative initiatives,

1 CSIRO. (2020, August) Circular Economy and Waste Management. (Circular Economy section, para. 1). Retrieved from <https://www.csiro.au/en/Research/Environment/Circular-Economy>

2 Circle Economy. (2020, January) [The Circularity Gap Report 2020](https://www.circularity-gap.world/2020#interactive). Retrieved from <https://www.circularity-gap.world/2020#interactive>

3 CSIRO, *ibid*, Circular Economy section, para. 1

4 *ibid*

5 BCSD Turkey. (n.d.) Sustainable Industry and Circular Economy. Retrieved from <http://www.skdturkiye.org/surdurulebilir-sanayi-ve-dongusel-ekonomi>

6 UNIDO. (n.d.) Circular economy. Retrieved from <https://www.unido.org/our-focus-cross-cutting-services/circular-economy>

7 *ibid*

8 Akkuçuk, U. (2019) *The Circular Economy and Its Implications on Sustainability and the Green Supply Chain*. USA: IGI Global

which the Commission will implement in 2020-2023.⁹ As to EU funding in 2016-2020, the Commission has stepped up efforts totaling more than €10 billion in support of the circular economy transition through Horizon 2020, Cohesion policy, EFSI, and the LIFE Programme.¹⁰

The new CEAP has not only more comprehensive content than the 2015 Action Plan but also differs from the 2015 Action Plan in terms of both having a subtitle specific to climate change and giving place to leadership expressions at the global level in combating climate change. The concept of climate change has been given as the main field of action in the CEAP, and mainly includes the determination of the problems and their solutions in combating climate change. Another remarkable difference between the two action plans is that there are 36 references to the concept of "climate change" in the Commission Staff Working Document of the 2020 Action Plan. Although this is a significant difference in numerical terms, it also contains important differences regarding the solution.

The EU, which struggles with climate change in many ways, plays an important role both with its integrated policies and strategies it develops and by being included in international agreements. We see that this role is reinforced in the new Circular Economy Action Plan adopted in March 2020, with the statement that it will show leadership at the global level in the fight against climate change.

2.2. Circular Economy in Turkey

Circular economy continues to be understood primarily as waste management and a recycling strategy by most of the institutions, companies, and people, but economic opportunities are far broader and more diverse. With the right enabling conditions, circular economy could provide new opportunities for economic diversification, value-creation, and skills development. Even though, circular economy is still a new topic, which has been mostly discussed in the context of plastic pollution and zero waste in Turkey, there are new developments, which prove that the business sector is interested in the topic. There are some initiatives where waste is central to the discussions while there are some others where the transformation of the production patterns is considered.

Government Perspective and Action on Circular Economy in Turkey

The Zero Waste Project was initiated in 2017 in Turkey by the Ministry of Environment and Urbanization. 18.750 public institutions joined the project and 126 tonnes of paper, 8,7 tonnes of glass were recycled while 9,1 tonnes of organic waste was composted until May 2019, as reported by the Ministry of Environment and Urbanization.¹¹

In line with the vision of The Zero Waste Project, most circular initiatives in Turkey are currently based on the utilization of waste. Some Turkish recycling companies are even importing waste for recycling.¹²

⁹ European Investment Bank. (2020, May) The EIB Circular Economy Guide – Supporting the circular transition. Retrieved from https://www.eib.org/attachments/thematic/circular_economy_guide_en.pdf

¹⁰ Ibid

¹¹ Nuroğlu, E. (2019, July 01). Döngüsel iktisat yolunda Türkiye: Sıfır Atık Projesi. AA. Retrieved from <https://www.aa.com.tr/tr/analiz/dongusel-iktisat-yolunda-turkiye-sifir-atik-projesi/1520219>

¹² Netherlands Enterprise Agency. (2019, October). To Cycle or not to Cycle Towards a circular economy in Turkey. Retrieved from <https://www.rvo.nl/sites/default/files/2019/10/To-cycle-or-not-to-cycle.pdf>

Turkey is the largest destination for waste exported from the EU, with a volume of around 11.4 million tonnes in 2019. This was almost three times as much as in 2004.¹³ However, according to the principles of a circular economy, it would be best to eliminate waste already at the level of product design. In contrast to the current 'take, make and waste' linear economy, in a circular economy waste does not exist and all products are made to be remade. That is why the Turkish government started focusing on waste management, but the plan is gradually shifting to cover the full economic cycle now.



The Ministry of Environment and Urbanization has recently started the development of “Regional Activity Center for Sustainable Consumption and Production (SCP / RAC) and Roadmap” to serve the implementation of the 2030 Agenda, to ensure the inclusion of resource efficiency practices in the industry, to encourage the development of environmentally friendly business models that support Circular Economy, and to create policy instruments that support these actions.¹⁴ Sustainable Consumption and Production (SCP) approach is essential for a circular economy and already aligned with the new Circular Economy Action Plan of the European Union adopted in March 2020. SCP is also directly related to the 2030 Sustainable Development Goals of the United Nations to which Turkey attaches special importance.¹⁵ The SwitchMed program implemented by the Regional Activity Centre for Sustainable Consumption and Production (SCP/RAC) of the United Nations Environment Programme Mediterranean Action Plan (UNEP/MAP) aims at supporting SCP practices for a circular economy in the Mediterranean Region. Preparation and implementation of Sustainable Consumption and Production National Action Plans (SCP NAP) by the countries are at the core of the program. Since Turkey is a party to the Barcelona Convention targeted by SwitchMed, we started to develop our SCP NAP as of June 2019 with the support of SCP/RAC.¹⁶ In order to set a ground for the plan, this baseline report and a road map were prepared in order to evaluate related national regulations and current practices on SCP. Based on the scope and priorities determined, 4 sectors namely: food, fisheries, and agriculture; housing and construction; consumer goods and manufacturing; and tourism were selected for the study.¹⁷

Most small and medium-sized enterprises, in Turkey, do not want to take risks by making this kind of structural changes. They prefer to be on the safe side and continue their traditional way of manufacturing without knowing the benefits deriving from circular economy. Some companies are even afraid they will

¹³ Eurostat. (2020, April) Turkey: main destination for EU’s waste. Retrieved from <https://ec.europa.eu/eurostat/en/web/products-eurostat-news/-/DDN-20200416-1>

¹⁴ <https://rec.org.tr/projeler/stu-uep-mevcut-durum/>

¹⁵ MoEU (2020) Background Study In preparation of the Turkish SCP National Action Plan and Roadmap Final Draft

¹⁶ Ibid

¹⁷ Ibid

lose reputation if they use secondary raw materials because their products will be considered second hand. That is why the government and civil society actors shall be more encouraging for the private sector and help increase public awareness about this topic.

Role of Civil Society Institutions/ Non-Governmental Organizations

SKD (BCSD) Turkey is a leading NGO working on CE in Turkey. **Turkey Materials Marketplace (TMM) Project is a functional and innovative cloud-based platform creating economic and environmental value through cross-industry materials reuse**, which has been run through the cooperation between the Business Council for Sustainable Development (BCSD) Turkey and the Turkish Sustainable Development Association. It functions as a digital platform where industries exchange materials. It is funded by the European Bank for Reconstruction and Development (EBRD) aiming to contribute to the CE transition in Turkey. There are more than 100 companies registered on the platform. Turkey Materials Marketplace (TMM) is for example facilitating the circulation of industrial waste as secondary raw material and it is showing that companies are willing to change when some incentive is provided.

Turkey Materials Marketplace (TMM) continues to support its members in identifying potential materials transactions and assessing the feasibility of implementing materials transactions through several technical support tools.

As a result of these studies, successful collaborations have been established among companies;

- Two platform members; P&G and MGD Marmara Recycling have successfully collaborated through The Circular Vouchers by completing “Re-evaluation of non-standard products, scrapped during production, for industrial purposes” project.¹⁸

As of May 2020, 67 tons of non-standard products (detergent, soap, toothpaste, etc.) were converted into new products that serve as cleaning agents for carpets/cars, etc.¹⁹

- PepsiCo, which produces energy by converting organic wastes in its biogas plant, aims to find alternative organic waste via the TMM platform and successfully collaborated with Aromsa. Through a previous transaction, 20 tons of food waste generated by Aromsa had been utilized by PepsiCo in energy production. With The Circular Vouchers (a TMM member-specific technical grant support), PepsiCo took a step further in their collaboration with Aromsa and has completed a comprehensive study to maximize process efficiency and the optimization of production specifications as well as controlling the quality. In line with the results of The Circular Voucher studies, Aromsa’s additional 32 tons of waste was converted to biogas and PepsiCo has committed to regularly process Aromsa’s waste thus reaching the highest efficiency in energy production. The applied study has shown that proper formulation increases biological performances of Aromsa’s organic wastes in PepsiCo’s processes and thus enables the production of a higher amount of electrical and heat energy. Within the collaboration established through the TMM

¹⁸ Turkey Circular Economy Platform. (n.d.) Turkey Circular Economy Platform – 14th Transaction. Retrieved from https://dongusekonomiplatformu.com/en/tmm/post_turkey-circular-economy-platform-14th-transaction_217.html

¹⁹ Ibid

platform, Aromsa's food processing waste is periodically converted into biogas and used as energy in PepsiCo facility.²⁰

Regional Environmental Center (REC) Turkey is an independent international organization. It is not-for-profit and has an unbiased structure. REC Turkey Country Office (REC Turkey) started to operate in May 2004 in Ankara. REC Turkey plays an effective role in the process of environmental problem-solving in Turkey by supporting collaboration between the government, non-governmental organizations (NGOs), private sector and other environmental stakeholders and by ensuring public participation in the information sharing and environmental decision-making processes.

REC Turkey / E-waste report

"Beyond Waste" report, which is prepared by the Regional Environmental Center (REC) Turkey with the support and cooperation of [S360](#) and Vodafone is online. The report took a picture of both the global and national issues and aimed to create a base for the solutions to be produced to the [e-waste](#) problems in Turkey. In the following process, REC wants to produce solutions to these problems in a participatory way, especially among young people, with the "Open Innovation Platform".²¹

2.3 Legislation: general overview and main aspects

The environmental policy is regulated under the Environmental Law No.2872 (1983). Municipal waste, packaging, medical, hazardous wastes, excavation soil, construction and demolition, batteries and accumulators, engine oils, industry oil, end-of-life vehicles, electric and electronic wastes are all regulated under the Law. Environmental Law, Metropolitan City Law and Municipal Law refer to waste management rules.

Law	Content
Environmental Law No. 2872	to protect and improve the environment(...)of all citizens; make better use of and preserve land and natural resources(...)prevent water, land and air pollution; by preserving(...)vegetative and livestock assets and natural and historical richness;(...)secure health and life conditions in conformity with economical and social development objectives.
Greater/Metropolitan City Law No.5216, 10.07.2004	to regulate the legal status of the greater city management, and to ensure undertaking of services effectively, efficiently and in harmony within a plan.

²⁰ Turkey Circular Economy Platform. (2020, March) 12th Transaction: PepsiCo & Aromsa. Retrieved from <http://turkey.materialsmarketplace.org/news>

²¹ For more information: <https://rec.org.tr/wp-content/uploads/2020/06/AtiginOtesinde2020.pdf>

Municipal Law No.5393, 03.07.2005

to lay down the establishment, organs, administrations, duties, powers, responsibilities and working procedures and principles of municipalities.

Energy Efficiency Law No.5627, 02.05.2007

the efficient use of energy, the prevention of waste, reduce energy costs and covers rules for the industry, big buildings, project support, consultancy companies, voluntary agreements.

Water Law

In draft

3 National Performance

3.1. Regulation Related to Circular Economy

Regulations	EU Directives
Waste Management	
Regulation on Waste Management (29314 th Official Gazette, 02.04.2015)	2008/98/EC (framework)
Regulation on the Control of Packaging Waste (30283 th , 27.12.2017)	2015/720/EU
Regulation on the Control of Waste Electrical and Electronic Equip. (28300 th , 22.05.2012)	2012/19/EU
Regulation on the Control of Waste Batteries and Accumulators (25569 th , 31.08.2004)	2006/66/EC
Regulation on the Control of Waste Oils (26952 th , 30.07.2008)	2008/98/EC (framework)
Regulation on the Landfill of Waste (27533 th , 26.03.2010)	2008/98/EC (framework)
Regulation on Waste Incineration (27721 th , 06.10.2010)	2000/76/EC
Regulation on Herbal Oil (29378 th , 06.06.2015)	2004/24/EC
Regulation on Control of Medical Wastes (29959 th , 25.01.2017)	
Regulation on Ship Wastes and Control of Waste (25682 th , 26.12.2004)	1257/2013

Regulation on Control of End of Life Vehicles (27448 th , 30.12.2009)	2017/2096/EU
Regulation on Control of PCBs and PCTs (26739 th , 27.12. 2007)	1996/59/EC
Regulation on Zero Waste (12.07.2019)	2008/98/EC (framework)
Energy Efficiency	2006/21/EC
Regulation on Mining Waste Management	2012/27/EC
Regulation on Energy Efficiency (30470 th , 06.07.2018)	2010/31/EU
Regulation on Energy Performance of Buildings (30051 th , 28.04.2017)	2009/125/EC
Regulation on Eco-design for Energy-Related Products (27722 th , 07.10.2010)	
Regulation on Environmental Labelling (30570 th , 19.10.2018)	
Water	
Regulation on Urban Waste Water (26047 th , 08.01.2006)	
Food	2000/60/EC (framework)
Regulation on Waste Management (29314 th , Official Gazette, 02.04.2015)	
Construction and Demolition	2008/98/EC (framework)
Regulation on Excavated Soil, Construction and Demolition Waste (25406 th , 18.03.2004)	2008/98/EC (framework)
Ecolabel	
Regulation on Eco-label (30570 th , 19.10.2018)	66/2010
Regulation on Energy Efficiency Labelling	2010/30/EC

3.2. National Initiatives

As mentioned above, circular economy is still a new topic, which is mostly discussed in the context of plastic pollution and zero waste in Turkey. However, there are new developments, which prove that the business sector is interested in the topic. There are some initiatives where waste is central to the action

while there are some others where the transformation of the production patterns is considered. The Ministry of Environment and Urbanization has recently started the development of “Regional Activity Center for Sustainable Consumption and Production (SCP / RAC) and Roadmap” to serve the implementation of the 2030 Agenda, to ensure the inclusion of resource efficiency practices in the industry, to encourage the development of environmentally friendly business models that support the Circular Economy, and to create policy instruments that support these actions.²²

There are important developments on the business side as well:

Arkim

Arkim Chemicals manufactures food preservatives from natural sources of calcium. It can be utilized in various different sectors ranging from packaged food, vegetable, fruit, pharmaceutical industry, to cosmetics. It prolongs the shelf life of the products through natural ingredients and has no side effects.²³ Arkim produces food preservative from eggshell waste from the liquid-egg producing company Anako.²⁴ This eggshell waste would otherwise be landfilled and that is why this is a good example of closing the loop. The food preservative also has a higher value than the eggshell waste, which makes this a good example of upcycling. Additionally, the food preservative also has a biological meaning in the sense that it is environmentally friendly. Altogether, this is a perfect example of industrial symbiosis and the advantage of circular economy.²⁵

Whole Surplus (Fazla Gıda)

The whole Surplus was established in 2015, with the idea of finding solutions through a technology-based initiative to the Climate Action. Carbon emissions from food waste constitute 8% of the overall emissions causing climate change. The whole Surplus was established with the aim of creating technology-based solutions to reduce food waste in the food supply chain by 50% until 2030. From the first day, they started to create food waste awareness in the private sector and aimed to set an example for the establishment of new startups.

The whole Surplus is an effective waste management platform for businesses. It creates economic and social value from surplus food by managing the unsold products (food) of the businesses in the most effective way.²⁶

Hagelson

It is an R&D company established with the support of TÜBİTAK (The Scientific and Technological Research Council of Turkey) in March 2016. The company is mainly working on polymer materials and new recycling systems.

Thanks to its patented new technology, Hagelson manufactures new plastic raw material from the recycling of leftover and waste carpets. Thus, eliminates the problem of disposing of the woven residual carpets that accumulate during the manufacturing, the leftover parts formed in the carpet floor covering

²² <https://rec.org.tr/projeler/stu-uep-mevcut-durum/>

²³ Turkey Circular Economy Platform. (n.d.) What are the examples? Retrieved from https://donguseleekonomiplatformu.com/en/knowledge-hub/article_3-What-are-the-examples_13.html

²⁴ Turkey Materials Marketplace. (December 2018). 5th material transaction is completed!

²⁵ Netherlands Enterprise Agency. (2019, October). To Cycle or not to Cycle Towards a circular economy in Turkey. Retrieved from <https://www.rvo.nl/sites/default/files/2019/10/To-cycle-or-not-to-cycle.pdf>

²⁶ Turkey Circular Economy Platform. (n.d.) What are the examples? Retrieved from https://donguseleekonomiplatformu.com/en/knowledge-hub/article_3-What-are-the-examples_13.html

business or the old waste carpets collected during the project phase, and converts them into raw materials and returns them back to the economy.

Recycling of a 500 square meter carpet protects 12 m² of land and 29m³ of water from becoming polluted while preventing 2,2 tons of CO₂ from being emitted. It also equals to the one-month energy consumption of 7,2 households. Approximately 400 kilograms of plastic raw materials can be produced from a 500 m² waste carpet.²⁷

Komporize

Turkey's tea production ranks fifth in the world, with approximately 1.2 million tons per year. Tea fiber waste is produced during this process. The amount of tea fiber that emerges is significant as 60-70 thousand tons annually, which are not evaluated in any way and destroyed in the form of burning or being left to rot. Komporize is a start-up that is dedicated to overcoming the negative environmental impact of plastics by producing alternative biocomposite materials, using inert agricultural fiber wastes. The fiber ratio in the mixes is up to 90% depending on the place of use. Komporize aims to reduce the harm of these plastics to the environment by ensuring that these products disappear earlier in nature than other plastics. The produced raw materials appeal to companies that provide end-products for the automotive, furniture, construction, architecture, toys and consumer industries.²⁸

Biolive

Biolive is a company that designs and develops the production process of bio-based plastics from the olive kernel, produces bio-based granules and is also currently continuing research and product development at Yıldız Technical University Technopark. It was established in 2016 as a start-up at the Istanbul Technical University Technopark. Later it became a company with the investment it received from Vestel Ventures within Zorlu Holding in 2017. Currently, the company works on bioplastic production for Vestel refrigerators. These bioplastics can be used in pet bottles, disposable cutlery and food packaging, which can be lost in nature within 3-5 months. It prevents a significant amount of plastic waste.²⁹

Toyi

Toyi, an award-winning project, is a limitless creative play kit without instructions that enables children to transform everyday objects around them into unique toys. With a kit consisting of wheels, feet, hands, eyes, joints, sticks, flexible connectors kids aged 6+ can transform any object around them into a toy of their own creation. There are no instructions or rules in Toyi kits. The entire process is left to children's imagination. With the open-ended play experience Toyi provides, children can make a limitless number of toys using their creativity. Toyi supports creativity, upcycling and 21st-century skills. Toyi helps children learn upcycling through play (For example, Turn a water bottle into a six-armed robot, an old box into a train compartment or a pine cone to a cute monster etc.). With Toyi, children are making their own toys

²⁷ [Ibid](#)

²⁸ Netherlands Enterprise Agency. (2020, May) Circular Food Turkey. Retrieved from <https://www.rvo.nl/sites/default/files/2020/05/Circular-Food-Turkey.pdf>

²⁹ Ibid

by redefining and redesigning everyday objects around them. Toyi helps children become more creative, productive and conscious consumers.³⁰

TRT-2 / Geri dönüşen sanat

The 6-part documentary series which is titled “Geri dönüşen sanat (Recycled art)” focused on artists who produce works of art with creative designs using waste materials, and on the harmonious transformation of recycled art, environment and nature awareness and aesthetics into art, was shown on TRT 2, a Turkish culture and art television channel.³¹

4 Findings

Production and consumption

According to the data of Eurostat, the statistical office of the European Union (EU), the EU exports of waste reached 31.0 million tons, with a value of EUR 13.4 billion in 2019. As reported by Eurostat, Turkey ranked first with 11.4 tons of waste imported from the EU, well ahead of other countries. While India ranked second by having imported 2.9 million tons of waste from the EU countries, Britain ranked third with 1.9 million tons.¹⁷² The Ministry of Environment and Urbanization has recently started the development of “Regional Activity Center for Sustainable Consumption and Production (SCP / RAC) and Roadmap” to serve the implementation of the 2030 Agenda, to ensure the inclusion of resource efficiency practices in the industry, to encourage the development of environmentally friendly business models that support Circular Economy, and to create policy instruments that support these actions.³²

Waste Management

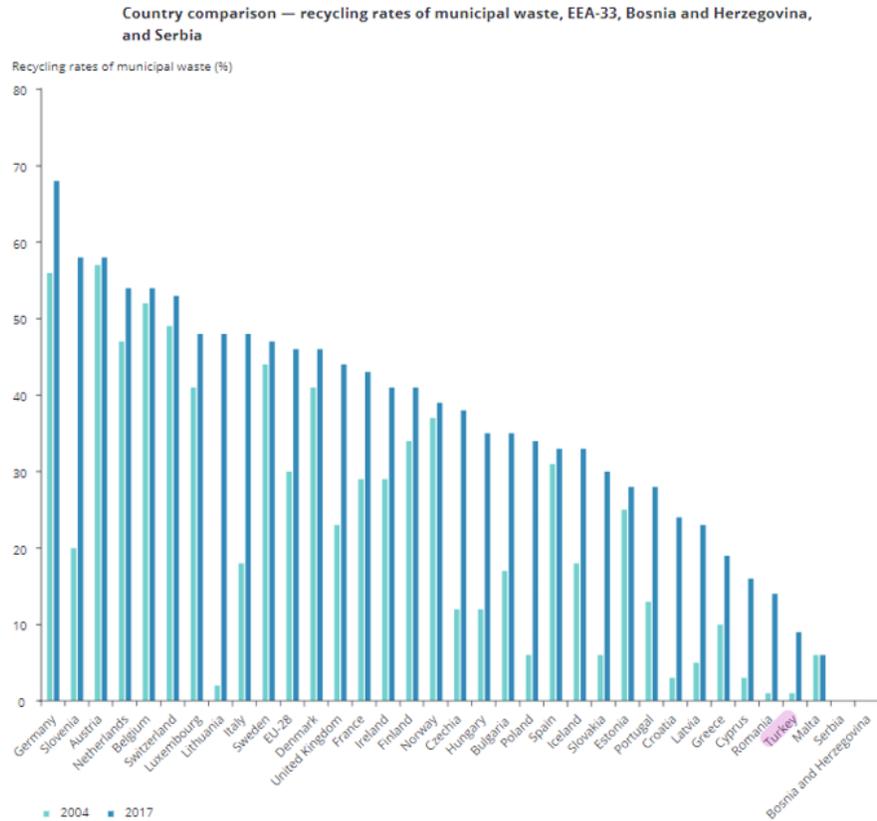
Turkey is mostly aligned with the EU Directives on waste management. However, implementation has not improved enough yet. According to the EEA report, in 2017 Turkey had the lowest recycling rates of municipal waste after Malta and Serbia in Europe.³³

³⁰ <https://toyi.io/en/whatistoyi/>

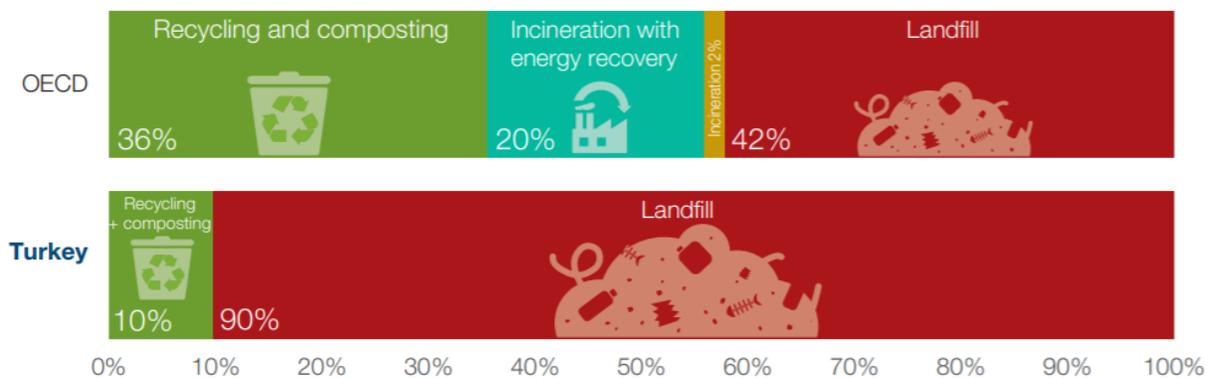
³¹ <https://www.trt2.com.tr/sanat/geri-donusen-sanat>

³² <https://rec.org.tr/projeler/stu-uep-mevcut-durum/>

³³ https://www.eea.europa.eu/publications/soer-2020/chapter-09_soer2020-waste-and-resources/view



Some progress has been made in expanding waste treatment infrastructure. About 90% of municipal waste is sent to landfills, and only a small quantity is recovered. Only 10% of municipal waste was collected separately in 2018.³⁴



Source: OECD (2018), "Municipal waste, generation and treatment", OECD Environment Statistics (database)

Secondary Raw Materials

³⁴ OECD. (2019, February) OECD Environmental Performance Reviews: Turkey: 2019. Retrieved from <http://www.oecd.org/env/country-reviews/Highlights-Turkey-2019-ENGLISH-WEB.pdf>

The work on the use of secondary raw material (SRM) in Turkey is at very early stages. Most small and medium-sized enterprises in Turkey do not want to take risks and trust their traditional way of manufacturing. Some companies are even afraid they will lose reputation if they use secondary raw materials because their products will be considered second hand. That is why the government can be more encouraging for the private sector and help increase public awareness about this topic. Turkey Materials Marketplace is for example facilitating the circulation of industrial waste as secondary raw material and is showing that companies are willing to change when some incentive is provided.

Competitiveness and Innovation

Regarding CE, Turkey has not had a competitive and innovative profile. It is following the developments especially in Europe and aims to adapt them to Turkish legislation and implementation. The business sector has an important role in understanding and improving the CE practices in Turkey. The business sector is interested in the concept and puts capacity for R&D and implementation. On the other hand, as stated above, companies are willing to change when some incentive is provided.

5 Concluding Notes

Circular Economy has been mainstreaming both in European and Turkish context. There are concrete policies and implementation examples in the EU. Activities related to waste management dominate the public policy agenda in Turkey while the business sector is interested in CE as the new way of designing and making business. However, circular initiatives are not visible enough to trigger great impact such as creating jobs and adding value. The fact is that the private sector together with national and regional authorities, cities and citizens are still relatively uninformed of the potential benefits of the circular economy concept and they also need to mobilize. Information provision, awareness-raising, education, training and capacity building on the concept of circular economy should be considered. More ambitious and better coordinated circular economy policies need to be established and implemented. Strategic planning, substantial investment and stronger administrative capacity are required as well.

One of the main requirements for a CE is that different stakeholders need to work together. The government, private sector and academia can all benefit from the opportunities provided by circular economy. Moreover, cross-border partnerships can also be established. Governments could exchange knowledge on the procurement of circular economy projects and necessary legislation adoption. The private sector, NGOs and academia could work together to share best-practices about waste management and co-funding of R&D projects in this pioneering topic.