

Column 2 The City of Amsterdam—towards a circular economy generating no waste

In recent years, we see positive moves to explore a transition to a circular economy in order to realize a sustainable society amid the deepening of environmental problems, such as climate change and marine plastic litter, increases in demand for resources, energy, and food, and in the amount of waste generated. A transition to a circular economy refers to redesigning existing linear economic and social systems (linear economy)¹⁴⁸ based on mass production, mass consumption, and mass waste in order to generate no waste, and creating circular economic and social systems (circular economy) in which wastes are treated as new resources, with products and raw materials continuing to be reused or repurposed.¹⁴⁹ For example, in the natural world, when leaves fall from trees around autumn to winter, the fallen leaves become feed for insects, fungus and bacteria, and leftovers and droppings excreted by those organisms accumulate at the foot of the trees. Rainfall and snowfall cause those materials to seep into the soil, and when the trees become active in spring, the materials serve as critical nutrients for them.¹⁵⁰ Yasui (2021) mentioned that originally the concept of “waste” did not exist in the natural world.¹⁵¹ The Ellen MacArthur Foundation,¹⁵² which promotes the circular economy, defines that the circular economy is based on three principles, driven by design: (1) eliminate waste and pollution; (2) circulate products and materials; and (3) regenerate nature.

This column describes efforts made by the City of Amsterdam, the capital of the Netherlands, to achieve a full transition to a circular society by 2050. Under the Amsterdam Circular 2020-2025 Strategy, a five-year concrete strategy published by the city, upholds the following goals: (1) halve the use of primary raw materials by 2030; and (2) achieve a fully circular city by 2050.¹⁵³ The European Commission¹⁵⁴ and the government of the Netherlands¹⁵⁵ are also promoting a circular economy.

At the heart of the abovementioned efforts is the “doughnut economics” concept, a new economics concept proposed by British economist Kate Raworth. The doughnut economy concept, which the City of Amsterdam was the first city in the world to adopt, aims to move away from existing values that focus and depend on economic growth and create a society that ensures prosperity for all within the means of our planet. The concept diagram of the doughnut economy (Column Figure 2-1), which Raworth calls

¹⁴⁸ Ministry of Economy, Trade and Industry (2020), “Circular Economy Vision 2020.”

¹⁴⁹ See the website of the government of the Netherlands (<https://www.government.nl/topics/circular-economy/from-a-linear-to-a-circular-economy>).

¹⁵⁰ See the website of the Science Council of Japan (https://www.scj.go.jp/omoshiro/junkan3/j3_1.html).

¹⁵¹ Yasui, A (2021), *SAAKYURAA EKONOMII JISSEN* (Circular Economy in Practice: A Business Model for the Netherlands), Gakugei Shuppansha.

¹⁵² See the website of the Ellen MacArthur Foundation (<https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview#:~:text=timescales.%20and%20materials.,A%20circular%20economy,value%20and%20regenerate%20nature>).

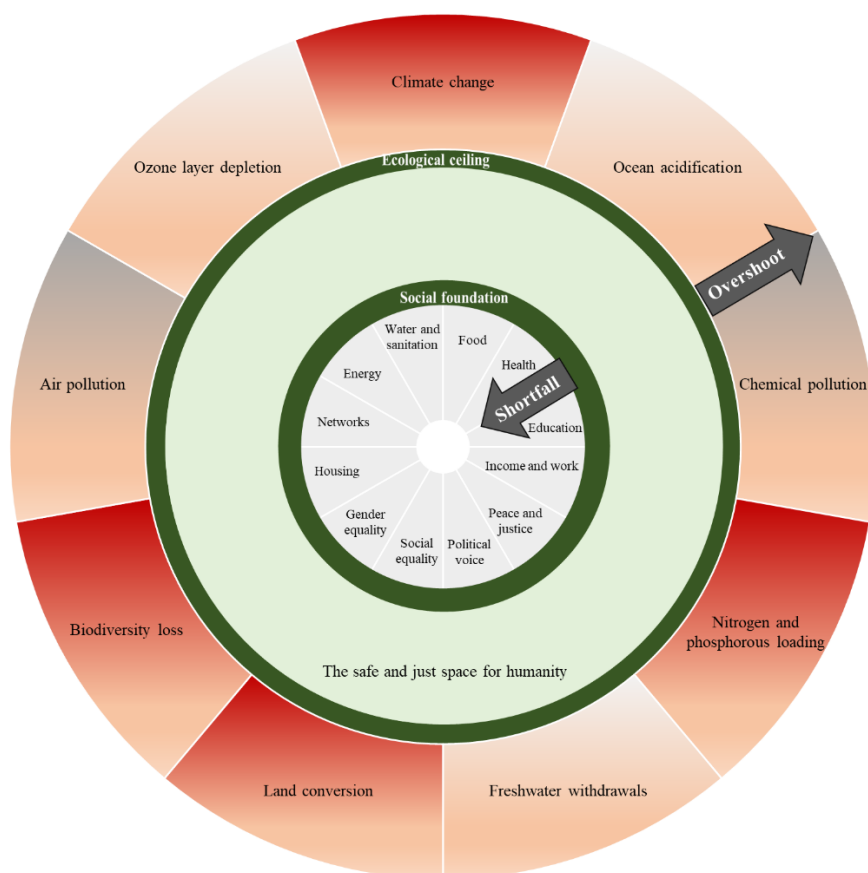
¹⁵³ City of Amsterdam, (2020), “Amsterdam Circular 2020-2025 Strategy Public version,” <https://www.amsterdam.nl/en/policy/sustainability/circular-economy/>.

¹⁵⁴ In December 2015, the European Commission published the Circular Economy Package, which indicated the direction of the transition toward a circular economy, followed by actions. <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52015DC0614>.

¹⁵⁵ In September 2016, the government of the Netherlands published the Government-wide Programme for a Circular Economy, intended to realize a 100% circular economy by 2050. <https://www.government.nl/documents/discussion-documents/2017/01/24/national-agreement-on-the-circular-economy>.

“humanity’s compass in the 21st century” describes two concentric rings (doughnut), the inner ring represents the minimum required social foundation and the outer ring represents the ecological ceiling. The doughnut is a safe and just space for humanity. Raworth (2017)¹⁵⁶ stated that our challenge in the 21st century is to create economies that make us thrive, whether or not they grow, in the rich web of life.

Column Figure 2-1. Conceptual picture of Doughnut Economics



Source: Raworth (2017).¹⁵⁷

The City of Amsterdam is promoting the transition to a circular economy, while identifying the areas where further efforts are necessary by measuring the progress and effects of the efforts made. It is implementing various initiatives together with companies and citizens¹⁵⁸ based on the principle of “learning by doing,” which refers to learning during the process of cocreation.¹⁵⁹ This approach is based on the recognition that to achieve a full transition to a circular economy, it is essential that individuals’ behavior changes first and the system as a whole ultimately changes, although that may be a time-

¹⁵⁶ Raworth, K., (2017), *Doughnut Economics*, (Kurowa, A., trans. (2021) *DOONATSU KEIZAI*, Kawade Bunko).

¹⁵⁷ Raworth, K., (2017), *Doughnut Economics*, (Kurowa, A., trans. (2021) *DOONUTSU KEIZAI*, Kawade Bunko).

¹⁵⁸ See the website of the City of Amsterdam (<https://www.amsterdam.nl/en/policy/sustainability/circular-economy/>).

¹⁵⁹ City of Amsterdam, (2020-2021), “Circular Economy Programme: Lessons and Recommendations 2020-2021 Public Version.”

consuming process.¹⁶⁰ The prerequisites for realizing a circular economy include shifting the coverage of taxation from the labor force to raw materials and energy, so the City of Amsterdam is implementing reforms toward a circular society by making policy choices in cooperation with the government of the Netherlands and the European Commission.¹⁶¹

¹⁶⁰ City of Amsterdam, (2020-2021), “Circular Economy Programme: Lessons and Recommendations 2020-2021 Public Version.”

¹⁶¹ See the website of the City of Amsterdam (<https://www.amsterdam.nl/en/policy/sustainability/circular-economy/>).