WellBeing News

Volume 5 Issue 11 WellBeing News - Vol. 5, Issue 11, December 2023

Article 1

1-9-2024

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Recommended Citation

Rowan, Andrew N. and Rowan, Kathleen (2024) "A Circular Economy and "Feel Better"," *WellBeing News*: Vol. 5: Iss. 11, Article 1.

Available at: https://www.wellbeingintlstudiesrepository.org/wbn/vol5/iss11/1

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Jan 09, 2024 A Circular Economy and "Feel Better"

By Andrew Rowan, DPhil and Kathleen Rowan CEO, WellBeing International

Increasingly, the world recognizes human population growth, excess consumption, overuse of natural resources, and degradation of the natural environment as threats to planetary sustainability.

Linear vs. Circular Economy

The current global linear economic framework, characterized by resource extraction, product manufacture, and consumption, followed by product disposable, is perceived as one of the global systems that must be changed. Instead, it is argued that the world should adopt a circular economic system emphasizing longer product lives, recycling discarded products to create new items, reducing waste and landfill requirements, and reducing the extraction of new materials. The transition to a circular global economy will require behavior changes by both producers *and* consumers.

Production

Reducing human consumption is a complex challenge because product consumption is varied and widespread. Fossil fuels, cement, steel, and agricultural fertilizers are four high-consumption items reflecting this variety. The International Energy Agency (IEA) predicts that global demand for oil, gas, and coal will peak by 2030, driven partly by the policies many countries have adopted to promote renewable energy sources and transport options. We may have already reached **peak cement**, while global steel production **fell** in 2022 but may not have peaked yet, and worldwide agricultural fertilizer use continues to **grow**. Nevertheless, a linear economic system has usually led to higher profits for manufacturers because it typically does not include the many negative externalities, such as the costs of pollution, dealing with product lifetime waste, carbon emissions, and any social costs.

Consumption

Consumers also benefit from the current linear economic system because they do not pay for the total product costs, including the negative externalities. Lower prices drive the demand for short-lived (and lower-cost) throwaway products.

Three Major Principles

A circular economic framework involves three principles: eliminating waste and pollution, recycling materials, and regenerating nature. It encompasses both biological and manufactured items. The biological cycle involves returning or recycling nutrients from biodegradable materials to the earth to regenerate Nature. This might involve a relatively simple behavior, such as composting household organic waste, or a more complex system, such as a shift to regenerative agriculture. In the manufacturing cycle, products are circulated through reuse, repair, and recycling. According to the Ellen MacArthur Foundation, a truly circular economy includes **both cycles** and ideally requires eliminating all waste and pollution, recycling all materials and products, and regenerating nature.

Numerous national and international bodies – e.g., the US EPA, the European Union, the OECD, UNEP, and the World Circular Economy Forum – are addressing

global consumption and discussing what is required to create a circular global economy based on the abovementioned three core principles. For example, the US EPA and US Federal agencies established a sustainable materials management project in 2009.

Eliminating waste and pollution – The Roubaix Case Study

The Roubaix zero waste efforts are enhanced by France's passage of some of the most ambitious national waste reduction policies. For example, France was the first country in the world to ban supermarkets from throwing away unsold food. It was one of the first to enshrine extended producer responsibility into law, making big polluters financially responsible for the waste they produce, even after their items are sold. In 2020, France passed a law banning clothing companies from destroying unsold merchandise and established "Repairability index" labels for certain electronic products.

Given this national background, it is unsurprising that Alexandre Garcin selected Zero-Waste Roubaix for his campaign platform when running for a seat on the Roubaix City Council. After winning, Garcin sent out leaflets for 100 volunteers to participate in a year-long project to teach them how to live waste-free. A vital part of the project involved providing a luggage scale to each volunteer household so they could weigh the results of their consumption choices. It was not difficult to cut waste considerably by composting organic waste (making up about a third of the average family's waste) and being careful to recycle glass and metal (another third). There were also direct benefits to the households. The earliest participants saved around \$1,300 a year. Seven in ten households cut their waste by 50%, and one in four cut it by more than 80%.

However, Roubaix has only enrolled around 1.8% of its 100,000 residents in the nine years the project has been in place. These households represent the most responsive slice of the population. Nevertheless, Roubaix is looking to the future and has introduced zero-waste ideas and concepts into its public schools. The city has also encouraged its businesses to adopt zero-waste policies. The Roubaix *Zero Waste* campaign illustrates the many opportunities for ordinary

citizens to support global sustainability while saving money and feeling better (and more virtuous?) about themselves.

Economic research also indicates that waste reduction could produce financial rewards for communities. An OECD **report** reviewing economic models of circularity concludes that "most models find that a transition to a more circular economy – with an associated reduction in resource extraction and waste generation – could have an insignificant or even positive impact on macroeconomic aggregate outcomes." In other words, transitioning to a circular economy would not impose additional costs and may produce cost savings.

Recycling Materials and Products

Recycling and effective waste management are also central in circular economy discussions. For example, the US EPA reports that the waste produced annually by American citizens has more than tripled from 88.1 million tons in 1960 to 292 million tons in 2018. The recycled proportion **rose** from around 6% in 1960 to 26% in 2010, but it fell to 23.6% over the last decade. Fortunately, numerous examples of communities worldwide, besides Roubaix, exist that successfully pursue **zero-waste** goals and provide examples of how one might achieve higher recycling rates.

Regenerating Nature.

Another circular principle is the return of organic waste to regenerate the earth. Farming practices used to rely heavily on regenerative principles but have become much more linear in the last fifty years with the application of everincreasing amounts of inorganic fertilizers and chemical pesticides to increase crop yields. Fortunately, **regenerative agriculture**, including agroforestry, is gaining momentum. New systems are being devised and implemented to improve soil health and combat pests without flooding agricultural landscapes with inorganic fertilizers and chemical pesticides.

Final Comments

According to the 2021 Circularity Gap Report, the world economy already has some circular elements – amounting to 8.6% of global economic activity. The report claims that 17% of the world economy could be circular by 2030 by targeting a few sectors – e.g., housing, transport, and food production – with a high potential for change.

A continued movement towards a more circular economy, which aims to minimize waste and negative environmental impacts, offers many pathways to a wide range of potential participants.

Producers should strive to keep materials in circulation longer through improved life span designs and encourage and facilitate product repair. They should use materials that are easy to recycle or reuse, develop products that limit waste and pollution, and include the total costs to produce the products.

The WellBeing International Feel Better campaign encourages individual consumers to support the development of a circular economy by demanding products with long lives that can be recycled, repaired, and reused. They may also participate in recycling and be more judicious in their purchasing decisions.

Finally, **research** indicates that when people <u>voluntarily</u> adopt behaviors that benefit the environment (rather than have them mandated), they feel better.