Sustainable consumption and fair trade development

Kheda Musaeva*

Kadyrov Chechen State University, Grozny, Russia

Abstract. Currently, we find ourselves entrenched in an economic model reliant on fossil fuels and prone to generating waste. This model links development and expansion to the consumption of finite resources. It is imperative that we transform this global consumption pattern. However, this transformation must be executed in a manner that not only addresses but also advances efforts to combat issues such as poverty, hunger, inequality, inadequate healthcare, and housing shortages. These challenges inflict considerable harm on populations worldwide, with the southern hemisphere experiencing particularly severe repercussions, exacerbated by the profound impacts of climate change.

1 Introduction

Leaders from around the world have come together to confront the challenges of climate change and biodiversity loss. Among the most significant global commitments are [1]:

1. Climate Goals (Paris 2015): The Paris Agreement, established in 2015, strives to prevent global average annual temperatures from surpassing pre-industrial levels by more than 2°C this century. Its ultimate goal is to make every possible effort to limit warming to within 1.5°C.

2.Sustainable Development Goals 2030 (SDGs): The 2030 Sustainable Development Goals comprise an ambitious set of 17 global objectives aimed at reshaping economic and social development. These goals encompass various aspects of environmental preservation and improvement [2].

Despite these commitments, there are concerns that humanity may fall short of achieving all the Sustainable Development Goals and fully adhering to the Paris Agreement. To avert this scenario, urgent multilateral action and a concerted global endeavor are imperative.

Sustainable consumption is geared towards enhancing the efficient use of resources and fostering equitable trade. It seeks to alleviate poverty and ensure that everyone has the chance to enjoy a high quality of life, with access to necessities like food, water, energy, medicine, and other essential benefits. Embracing sustainable consumption not only contributes to safeguarding the planet for generations to come but also yields numerous immediate advantages [3].

*Corresponding author: mhedik@mail.ru

For instance, transitioning people away from the use of poor-quality and hazardous biomass fuels not only benefits the environment but also enhances human health. This exemplifies how sustainable consumption can yield both long-term and near-term benefits.

2 Research Methodology

The shift towards a more sustainable economic model can take place in either an equitable or inequitable manner. We firmly believe that any such transition, while safeguarding our vital natural resources, must also prioritize principles of social justice, human rights, and human well-being. In any future system, it should be imperative to provide fair pricing, safe and high-quality products, open access, and respect for human dignity and privacy, all in alignment with fundamental consumer rights and needs. The system should entirely exclude unjust mechanisms and unfair rewards or punishments. Instead, it should actively engage and motivate consumers by simplifying and making sustainable consumption choices readily accessible. If we fail to meet these conditions, the risk of resistance to sustainable consumption efforts will rise, and consumers will be left at a disadvantage [4].

If everyone were to adopt the lifestyle of the average Western European, it would necessitate the resources equivalent to three Earth-like planets. Likewise, maintaining the standard of living enjoyed by every American would demand the resources of five such planets. As disposable income in emerging economies continues to rise, the demand for consumer goods grows, placing even greater pressure on the planet's resources. World Ecological Debt Day, which marks the point in the year when we have consumed all of the Earth's resources, occurs earlier and earlier each year. In 2019, this day arrived on July 29. Each one of us must not only reduce our consumption but also change the way we consume these resources.

3 Results and Discussions

The solution to the problem of excessive consumption lies in transitioning to a circular economy model. This means moving away from the "take, make, dispose" model to one where waste is not discarded from the system but rather reused and regenerated. This, in turn, entails a more efficient use of fewer resources and the development and production of products that can be repaired, reused, or repurposed. Such a model will help slow down climate change and reverse the process of biodiversity loss. There are already several positive examples of companies adopting this model. For instance, Timberland produces footwear from recycled tires, and DyeCoo has developed a waterless and chemical-free method of fabric dyeing using only dyes themselves. To visually illustrate the concept described above, please refer to the diagram of the circular economy developed by the Waste and Resources Action Programme (WRAP).

People all around the world are becoming increasingly aware of the severity of the environmental crisis, viewing it as one of the foremost threats to their countries. This awareness has grown significantly since 2013. Consumers are a vital component of any production and consumption system and play a pivotal role in driving change. The choices consumers make empower them to influence the world around them. Some of the primary ways through which consumers can exert influence include:

1. Product and Service Choices: Consumers can opt for products and services that align with sustainability and environmental goals [5].

2. End-of-Life Product Disposal:How consumers dispose of products at the end of their life cycle is crucial. Recycling, proper disposal, and reducing waste contribute to sustainable practices.

3. Advocating for System Change:Consumers can advocate for changes in supply chains, regulations, and industry practices to promote sustainability.

Although consumers wield significant economic influence within the existing model, they may not always be able to effect the necessary systemic changes on the required scale. Unlocking the full potential of consumers to drive meaningful change more rapidly is essential.

There is a growing demand for sustainable products, particularly among younger consumers. Research has shown that 66% of consumers are willing to pay more for brands offering sustainable products. However, the actual purchase of sustainable products remains at around 20-30%. Choosing sustainable products can be challenging, as it requires effort, research, behavioral changes, and often higher costs. Nonetheless, consumers can impact the system without making purchases directly. By demanding better infrastructure for sustainable consumption, consumers can encourage the adoption of sustainable products more widely.

Access to energy is vital for inclusive growth, but energy production and consumption contribute significantly to greenhouse gas emissions and climate change. In many less economically developed regions, access to energy is limited, and billions of people rely on harmful fuel sources. Renewable energy sources are growing but pose challenges for consumers. Access to safe, sustainable, and affordable energy, coupled with clear information on reducing energy consumption, is essential [6].

Food systems are responsible for up to 37% of global greenhouse gas emissions. Food production, especially livestock farming, consumes vast energy, leads to deforestation, increased greenhouse gas emissions, and excessive water usage. Consumers can contribute by choosing locally grown, seasonal foods, reducing meat consumption, and supporting producers who adopt sustainable practices. Shifting to plant-based diets can significantly reduce land use and promote sustainability.

Addressing these challenges necessitates consumers making informed choices, advocating for systemic changes, and demanding greater access to sustainable options. As consumers, we have the potential to be a driving force in transitioning toward a more sustainable and environmentally conscious world.

The statistics on waste generation and its environmental impact highlight the urgent need for global action and sustainable practices [7]:

1. Daily Waste Generation:On average, each person generates approximately 0.74 kg of waste per day, which is roughly equivalent to the weight of two full plates of food.

2. High-Income Countries' Contribution: High-income countries, comprising only 16% of the world's population, are responsible for producing a disproportionate 34% of the world's waste.

3. Projected Waste Increase:The global amount of waste is projected to increase significantly, reaching 3.4 billion tons by 2050. This is twice the rate of population growth over the same period.

4. Food Waste:An alarming 30% to 40% of all food produced worldwide is spoiled or wasted, exacerbating food security and resource utilization challenges.

5. Plastic Recycling: Globally, a mere 9% of all plastic ever produced has been recycled. A significant 79% of this plastic is found in landfills or the environment, contributing to pollution, while 12% is incinerated [8].

These statistics underscore the pressing need for individuals, communities, businesses, and governments to adopt sustainable practices, reduce waste generation, and improve recycling and waste management systems. Addressing food waste, promoting recycling, and reducing plastic pollution are crucial steps toward a more sustainable and environmentally responsible future.

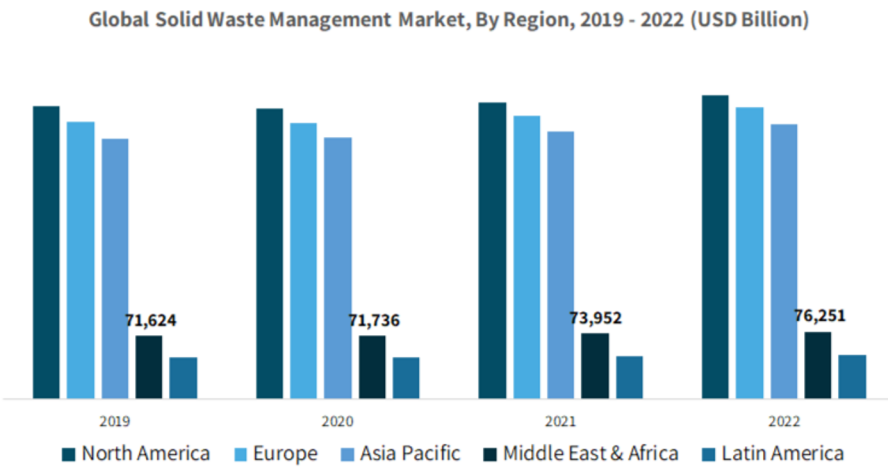

Fig. 1. Waste disposal in the world 2023.

Promoting sustainable consumption is essential for a more environmentally responsible future. Here are key considerations and potential technological solutions to support this transition [9]:

1. Access and Information:Consumers must have easy access to sustainable products and clear information about their environmental impact. This requires collaboration between manufacturers, retailers, and policymakers to ensure products are safe, durable, and resource-efficient, and that consumers receive reliable guidance on making sustainable choices.

2. Technology Solutions: New technologies play a vital role in enabling sustainable consumption:

- Lab-Grown and Plant-Based Alternatives:Innovations in food technology can create lab-grown or plant-based alternatives to traditional meat, reducing the environmental impact of food production [10].

- Smart Energy Meters:Smart meters allow individuals and cities to monitor energy consumption in real time, promoting energy efficiency and reducing waste.

- Electric Vehicles (EVs):The adoption of electric vehicles contributes to lower emissions and reduced reliance on fossil fuels in transportation.

- Internet of Things (IoT) Sensors:IoT sensors can help energy companies monitor and optimize energy usage, reducing emissions and commercial gas losses.

Embracing these technologies, along with continued research and innovation, is crucial for achieving sustainable and smarter consumption patterns. It requires collaboration between technology developers, businesses, governments, and consumers to create a more environmentally friendly and resource-efficient future [11].

4 Conclusions

Promoting sustainable consumption and production involves engaging various stakeholders and implementing timely measures. Here are key considerations:

1. Raising Awareness:To drive sustainable consumption and production, awareness campaigns should target all segments of society, including producers, consumers, political parties, scientific and cultural communities. Women, who often control household consumption, are crucial participants. Youth should be educated about sustainable development to ensure future responsibility.

2. Media and NGOs:Media outlets, non-governmental organizations (NGOs), and civil society have a pivotal role in mobilizing public support for sustainable development. They can counter industry lobbying efforts in resource-intensive sectors and advocate for government policies that prioritize sustainability.

3.Youth Engagement:Involving youth through education is vital. They will inherit the challenges of sustainable development and should be equipped with the knowledge and skills to address them effectively.

4. International Agreements:Compliance with international agreements, such as the Convention on access to information and public participation in environmental matters, is essential. Governments should fulfill their obligations regarding citizens' rights to information.

5.Timely Transformation:Delaying transformation measures will lead to higher costs in the long run. Accelerating the transition to sustainable lifestyles, production methods, and consumption patterns is essential. This can be achieved through the introduction of additional policies and avoiding outdated, environmentally harmful development practices.

By involving diverse stakeholders, increasing awareness, and taking timely action, we can work toward sustainable consumption and production, mitigating environmental impacts and ensuring a better future for all.

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