









The National Research University Higher School of Economics Institute for Statistical Studies and Economics of Knowledge (HSE ISSEK) presents the results of a human capital trends study. The study methodology included big data mining using the HSE ISSEK-developed iFORA system, expert sessions, and a Delphi survey of more than 400 leading international and Russian scientists specialising in human capital.

The project is being implemented by the World-Class Human Capital Multidisciplinary Research Centre and the UNESCO Futures Studies Chair (UNESCO Futures Literacy Chairs network). A complete list of trends is available a the unique open-access database at https://ncmu.hse.ru/chelpoten_trends.

This trendletter is based on data obtained from issek.hse.ru, rosstat.gov.ru, eshre.eu, pubmed.com, statista.com, thelancet.com, gminsights.com, and who.int.

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The Trend's Structure

- Developing "green" skills (ecological thinking)
- Implementing sharing and re-ownership business models
- Recycling and secondary use of things, new approaches to the production and disposal of food

Technological and economic changes have led to sociocultural transformations, such as the transition to more conscious consumption and a greater concern for the environment. This has been done in order to improve the quality of life and promote health. The use of environmentally friendly and resource-saving technologies has led to an increased need for the development of "green" skills. These skills are based on an ecological culture that emphasizes the importance of responsibility for nature. They are essential for sustainable production, responsible consumption, and efficient waste management.

Zoomers and millennials are quickly mastering new technologies and value a sustainable approach to consumption. This contributes to the active development of business models based on sharing and re-ownership. Recycling and secondary use of things and materials, such as recycling and upcycling, are becoming increasingly widespread. For example, in the textile industry, which is one of the largest consumers of resources and sources of carbon dioxide emissions, waste recycling is becoming part of companies' commercial offers. Fast fashion is gradually giving way to slow fashion, which is focused on investing in products with a longer service life.

The repeated use of raw materials is the basis of the circular economy. Thanks to it, waste reduction can reach (depending on the industry)

80%, and greenhouse gas emissions – 90%. It involves replacing traditional resources with renewable ones, extending the service life of goods, recycling, providing products for use instead of selling. Thus, in 2018, Volvo made a commitment that at least 25% of plastics in cars manufactured after 2025 should be made from recycled materials.

Conscious consumption is closely related to ensuring food security, optimizing production and recycling of food products. In 2022, the amount of food waste was estimated at 1.6 million tons, and there were 828 million hungry people. One of the solutions to the food problem is the distribution of products that have a minimal negative impact on nature during production, and the popularization of new diets. For example, today insects are eaten mainly in Asian countries, and in Western countries, interest in them is niche. However, in the future, such a diet may become more popular.

Laboratory production of food products will help reduce the burden on the environment.

According to some estimates, by 2040, 60% of meat consumed will be plant-based or cultured. Today, the distribution of synthetic products faces difficulties in the context of regulation, high production costs and its scalability. However, by 2030, according to the forecast of the Good Food Institute, artificially grown meat will compete with conventional meat in terms of price.

¹ The International Labour Organization classifies environmental thinking as "green" skills: willingness to learn about sustainable development; the ability to learn how to use "green" technologies in their workplaces; teamwork skills; resistance to necessary changes; the ability to communicate and negotiate, follow safety and health rules.

Key Estimates

\$74.3 billion

The global plastic recycling market could reach the global plastic recycling market by 2024 (from \$52 billion in 2023) 7.3%

will be the average annual growth rate of the global plastic recycling market in 2023–2028

The Trend's Characteristics



Impact on human capital

1

2

3

Weak signal³

Awareness is becoming a key factor in purchasing goods and services



Strongest manifestation period

2026-2030



Wild card⁴

The spread of digital clothing



Effect of COVID-19 pandemic

Did not affect the trend



Consequences of the wild card event actually taking place

Positive impact on the environmental situation in the world



Presence in Russia

Below the world level

 $^{^{2}}$ 1 = weak, 2 = medium, 3 = strong.

³ Weak signals are insignificant (rarely mentioned or discussed) events which indicate the trend may radically change in the future.

 $^{^4}$ "Wild cards" are difficult-to-predict events which, if they do happen, can significantly affect the trend.

Drivers and Barriers



Drivers

- Population growth and increased demand for raw materials, energy, and food
- Depletion of natural resources
- Implementation of measures to combat climate change
- Increase in waste generation and the use of hazardous and inefficient waste management practices
- · Changing hierarchy of values



- Lack of resources to finance the transition to a closed-loop economy
- Development of regulation lagging behind technological development
- Lack of qualified personnel and "green" skills among workers
- Indifference of the population, lack of a culture of caring for nature

Trend Effects



Opportunities

- Reducing energy and resource intensity of production
- Diversification of economic structure
- Creation of new jobs
- Reducing the burden on the environment



Threats

- Mutually exclusive environmental and social responsibility: environmental activism can lead to a decrease in the level of consumption of products, the income of companies and the inability of them to fulfill their obligations towards workers
- Rising prices for everyday goods