

## EUROPEAN SUSTAINABILITY: AMBITIONS AND CHALLENGES

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*The European Union (EU) has been the global leader in sustainable development strategy and climate change mitigation for decades. Key strategic documents, which indicate dedicated environmentally friendly policies of the Union, include, e.g., Europe 2020 Strategy, the Strategy for Circular Economy, the European Green Deal (EGD), and Fit for 55 package. In terms of Europe 2020 strategy on smart, sustainable and inclusive growth, the EU reached over 20% reduction of greenhouse gas (GHG) emission (from 2010 to 2020). And in terms of EGD, the most ambitious goal was set to make Europe the first climate-neutral continent with zero net GHG emission by 2050. Open Russian aggression against Ukraine in Feb 2022 forced Europe to be ready for new challenges, including overcoming dependence on Russian energy resources. Answering these challenges, the EU adopted REPowerEU strategy to eliminate its dependence on Russian fossil fuels till 2030. The Union imposes economic sanctions on the Russian regime and provides powerful financial support to Ukraine. Keeping in mind a huge military machine of Russia and terrorist way of thinking of its leader it seems we still need much more international efforts to turn Europe back to a sustainable track of development.*

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### Introduction

According to the classical definition of the World Commission on Environment and Development, “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Holdgate, 1987). The main three pillars of sustainable development were defined there as economic growth, social inclusion and environmental protection. And while experts discuss some limitations and possible development of sustainable development strategy (SDS) itself, during the last decades the strategy was applied in one or other form in most countries and communities over the world. The United Nations (UN) systematically sets and updates the Sustainable Development Goals (SDGs). Currently we are under the Agenda 2030, the set of 17 ambitious SDGs, implying world without hunger, poverty, with clean water and perfect sanitation for all, safe environment and effective international collaboration (Figure 1) (UN, 2016).

Unfortunately, global crises of the last years, including the COVID-19 pandemic and the Russian invasion of Ukraine with permanent demonstrative terrorist acts during more than two years prove the weakness of international institutions to face these challenges. This, in turn, threatens sustainable development strategy both for affected regions and globally. Hopefully, from the evolutionary point of view, humanity will move forwards and finally overcome the obstacles on the way to economic, social and environmental sustainability.



**Figure 1. UN Sustainable Development Goals icon (<https://sdgs.un.org/goals>)**

Meanwhile, it is important to analyze and support successful practices of effective implementation of sustainable development approaches. Currently, the global leader in applying the SDS in strategic planning and everyday operations is the European Union (EU) community. In this article, we briefly analyze strategic documents of the EU on sustainable development, ambitions and challenges to its successful implementation.

### **The EU sustainable development strategy**

The very basic document of the EU, the Treaty on European Union (Treaty, 1992) clearly declares the SDS as the fundamental principle of the EU functioning. According to the Article 2 of the Treaty, “the Community shall have as its task ... to promote throughout the Community a harmonious and balanced development of economic activities, sustainable and non-inflationary growth respecting the environment, a high level of employment and of social protection”.

The strategy was further developed in the European Commission’s strategic documents, including the Europe 2020 strategy on smart, sustainable and inclusive growth (EC, 2010). That document appeared as the strategy of the EU to overcome the global financial and economic crisis of 2008/2009. And it is indicative that the EU authorities saw the sustainable development approaches as the most effective way to overcome the crisis. One of key targets of the Europe 2020 strategy was the 20/20/20 climate/energy target. In terms of this goal, the EU planned to reach 20% reduction of greenhouse gas (GHG) emission (compared to 1990), 20% of all consumed energy to be produced from renewables, and 20% increased energy efficiency by 2020 compared to 2010. The EU reached these goals and now moves forward, having in 2021 the reduction of GHG emission by 21.9% and in 2022 by 23% compared to 1990 (EuroStat, 2023).

In 2015, the European Commission proposed the Circular economy acting plan, aiming to turn the Union’s economy from the linear model “Take-Make-Dispose” to the circular economy, where “the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimized” (EC, 2015). The strategy implies transformation of all aspects of production and consumption, starting from design of technological processes and products, and finishing with advanced technologies of waste treatment that reduces energy lost and reclaims material resources.

Maybe the best representation of circular economy is a natural ecosystem model. Indeed, during a few billion years of biological evolution on the planet, before *Homo Sapiens* appeared, there was no concept of waste. Food chains and chemical cycles of natural ecosystems were balanced and nature was able to treat any “biological waste” effectively. The key functional groups of living organisms in any natural ecosystem – producers, consumers and decomposers work interconnectedly and in an autoregulative way. In balanced ecosystems, decomposers (bacteria and fungi) process all biological waste produced by other organisms. Obviously, the ideal model of circular economy should mimic these natural cycles of energy and matter as much as possible (Figure 2).



**Figure 2. The model of the EU circular economy (EP, 2023)**

Because of permanent production of huge amount of all sorts of wastes in modern society, the important part of the circular economy plan is effective waste management. Following this sustainability-oriented strategy, in 2018, the European Parliament and the Council adopted the Directive (EU) 2018/850 (EP, 2018a), which set the goal for the member states to ensure that by 2035, the amount of municipal waste disposed in landfills is reduced to 10% or less of the total amount of municipal waste generated. Next, the Directive on packaging and packaging waste amendments (EP, 2018b) set new targets for the member states on recycling of particular packaging waste by the end of 2025 and 2030. According to the directive, at least 65% by weight of all packaging waste by 2025, and 70% by 2030 must be recycled throughout the EU. The following minimum targets for specific materials contained in packaging waste were set (the first number by 2025, the second - by 2030):

- 50% (55%) of plastic,
- 25% (30%) of wood,
- 70% (80%) of ferrous materials,
- 50% (60%) of aluminium,
- 70% (75%) of glass,
- 75% (85%) of paper and cardboard.

The most ambitious plans for European sustainability were proposed by the European Commission in 2019. The programme document of then newly elected President of the European Commission Ursula von der Leyen, the European Green Deal (EC, 2019) proposed to turn Europe into the first climate-neutral continent with zero net emission of GHG and other pollutants by 2050. Later the climate neutrality goal for the European Union by 2050 was fixed as a binding objective in the European Climate Law (EP, 2021).

While critics indicate that 2050 is too far from now, following this ambitious goal, the European Commission proposed the Fit for 55 package (EC, 2021) stating that the EU aims to reach 55% of GHG emission reduction and 40% renewables in total energy production over the EU by 2030. In addition, the revised directive on renewable energy sources RED III (EC, 2023b) sets an overall renewable energy target of at least 42.5% binding at the EU level by 2030, but aiming for 45% renewable energy sources.

In terms of environmental protection, the European Commission also proposed other sustainability-focused targets, e.g., 50% reduction the use of pesticides in agriculture, 25% of the Union farming lands to be transfer into organic farming, and 30% of lands and seas of the Union to be protected by 2030 (EC, 2020).

### **Russian invasion of Ukraine as the threat for European sustainability**

Before the full-scale Russian invasion of Ukraine in Feb 2022, the most strategic documents of the EU on European sustainability were based on a reasonable balance between economic and social development of the member states from one side, and overcoming climate change and environmental degradation from the other side. But the unprovoked and unreasonable war of Russia against Ukraine faced Europe with totally new challenges. Particularly, the EU could not tolerate any longer its significant dependence on Russian energy resources. There was no more room for the “business as usual” with Russia because it became obvious to the EU leaders that such “collaboration” may be used by Russia only to strengthen Russia’s geopolitical ambitions to control the European community.

In two weeks after the beginning of full-scale Russian invasion of Ukraine, the European Commission issued a new strategy articulated as REPowerEU (EC, 2022c), aiming for a significant reduction of Russian energy supplies, first of all Russian gas, in the European market. The communication proposed to restrict Russian gas supplies in the EU market by two thirds by the end of 2022, mostly through diversification of natural gas supplies. The European Commission proposed also to force implementation of renewables in the European energy market. As a result, imports of Russian natural gas supplies fell in the EU from over 45% of total gas imports (including liquified natural gas) in 2021 to less than 15% in 2023 (EC, 2024).

REPowerEU underlined the huge potential of the EU to build out renewable energy sources, including solar and wind energy. Forcing the Fit for 55 strategy on development of the EU's photovoltaic and wind capacities might result in 170 billion cubic meters (bcm) of yearly natural gas consumption saving by 2030 (EC, 2022c). This amount is comparable to whole Russian gas exports into the EU in 2021.

The potential of biogas and biomethane production as another renewable energy source is less powerful in terms of volumes throughout the EU, nevertheless is also a significant contribution to total renewable energy sources. The European Commission assessed that doubling the objectives of Fit for 55 for biomethane would lead to the production of 35 bcm of biomethane per year by 2030 (EC, 2022c). Currently many member states, including Germany, France, and Italy have significantly increased their biomethane production (Sulewski et al., 2023). Moreover, currently the emphasis of use of biomethane feedstock is changing from energy crops to organic waste including agricultural residues and manure, which is stimulated by the EU legislation on sustainable biomethane production (EC, 2018, 2023b).

It is worth noting that Ukraine as a powerful producer of agricultural products has a huge potential for biogas / biomethane production as well (Yakymenko et al., 2023). Despite a very modest current level of biogas production and virtually no biomethane production in the country, experts assess that Ukraine has the agricultural potential to produce about 20 bcm of biomethane annually (Geletukha et al., 2023) which can provide about two thirds of all before-the-war natural gas national demands.

### **Current challenges of European sustainability**

While the EU sustainable development policies and practices is a great example of global leadership in climate change coping and environmental protection ambitions, current challenges for the EU sustainability are significant and cannot be ignored. The EU member states still have critical dependence on fossil fuels in energy production. For example, in 2022, fossil fuels shared 70.9% of the total energy mix throughout the EU (EuroStat, 2024). Moreover, in 2022, fossil fuel subsidies over the EU reached about 123 billion euros (EC, 2022a), which is definitely not in line with the strategy on green transition of the EU economy. Of course, the subsidies significantly increased due to the Russian aggression against Ukraine and as a result, a significant growth of energy prices over Europe. But even before the war, the EU annually provided subsidies for fossil fuel industry of about 56 billion euros (EEA, 2023). In 2022 fossil fuels accounted for the largest share of the total subsidies (31%), while renewable energy sources received only 22% of energy subsidies, down from 40% in 2021 (EC, 2023a).

One more challenge for the EGD and European sustainability is that plans of the European Commission on green transition in agriculture is under protests of EU's farmers, who lose their profits

under new restrictions on pesticides and more challenging demands in organic farming. For example, in spring 2024, several thousand Polish farmers and other protesters marched through the Polish capital, Warsaw, to protest EU climate regulations they say are endangering their livelihoods (DW, 2024). Large territories of lands and sea, up to 30%, proposed by the European Commission to be protected under the EU nature protection legislation are also big challenges for member states. As a result, the Natural Protection Law based on the European Commission proposal was shelved by the European Council, possibly until the European Parliament election in summer 2024 and forming new teams of the EU authorities (GP, 2024).

It is worth noticing that farmer's subsidies are substantial throughout the EU. According to the European Commission, co-financing and complementary national financing will bring the total public budget dedicated to farmers and rural communities to €307 billion for the 2023-2027 period (EC, 2022b). But a recent study revealed that over 80% of the EU's Common Agricultural Policy supports GHG emissions-intensive animal products (Kortleve et al., 2024).

However, the biggest current challenge for the EU, and possibly globally, is the open terrorist war of Russia against Ukraine. During the more than two-year war, Russia has criminally been waging this unreasonable war against the independent European country, and continuing threaten other countries and territories. As a result, more than 11,700 civilians were killed in Ukraine from the beginning of the war till January 2024 by Russian terrorist attacks. The country infrastructure, especially energy infrastructure, was destroyed producing more than 153 billion dollars in damages (Zanuda, 2024). Additionally damages to the Ukrainian environment and natural resources from Russian terrorist acts currently is assessed by Ukrainian government at more than 60 billion dollars (MEU, 2024). Over 40% of Ukraine's GDP currently goes to resisting Russian aggression.

Ukraine receives significant financial and military support from the democratic world, first of all from the USA, the EU member states, Great Britain and many other countries. This support is crucial for the Ukrainian Armed Forces and for Ukrainian economy. But it seems that the global democratic community is totally unprepared for such unpredictable terrorist behavior of one of the countries which used to be a part of all key international institutions and still tries to mimic some international relations. And while the possibility of open military aggression of Russia against other European countries is under the discussion, it is obvious that sustainable development of Europe is impossible under the conditions of total ignorance of any international laws and moral norms by one of the countries (Russia) which is partially situated in Europe.

## **Conclusions**

The European Union has been a global leader in sustainable development strategy. The goals of the EU leaders to make Europe the first climate-neutral continent with zero net emission of greenhouse gases and other pollutants by 2050 is a bright example of the EU ambitions in the field. Nevertheless, currently the EU faces significant challenges on the way to the European sustainability. The fossil fuel energy sector is still covers a significant part on the EU energy demands, farmers across Europe protest against fast green transition of the agrarian sector, the Russian terrorist war against Ukraine and potential threats from Russia to all European countries are the main challenges that Europe should overcome on the way to sustainable European future.

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## Conflict of interest

The authors state no conflict of interest.

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