

## EU EXPERIENCE IN IMPLEMENTING SUSTAINABLE DEVELOPMENT GOALS: FEATURES AND ADVANTAGES OF APPROACHES

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Manuscript received: 10/02/2025

Revised: 13/03/2024

Accepted: 27/04/2025

DOI:10.52123/1994-2370-2025-1436

UDC 327.7

CICSTI 11.25.47

**Abstract.** In the last decade sustainable development has emerged as a cornerstone of global governance, bridging environmental preservation, economic progress, and social equity. This paper explores the theoretical underpinnings of sustainable development, tracing its evolution from early international frameworks to its integration into the European Union's (EU) policies. By comparing the EU's sustainable development approach with the United Nations (UN) framework, this research highlights the distinct mechanisms and strategies that position the EU as a regional leader in sustainability. Particular attention is given to how the EU has embedded sustainable development goals into its treaties, directives, and strategies, including the European Green Deal and Fit for 55 Package. The paper also examines the tools and principles guiding the EU's efforts, such as precautionary principle, policy coherence, and robust monitoring systems like Eurostat SDG reports. Despite the EU's progress, challenges persist, including disparities among member states and geopolitical pressures. This research concludes with recommendations to enhance the EU's global role in sustainable development, emphasizing the importance of policy innovation, international collaboration, and alignment with UN frameworks to address emerging global challenges. These findings have practical implications for Kazakhstan, which is taking confident steps towards achieving sustainable development goals.

**Keywords:** sustainability, sustainable development, sustainable development goals (SDGs), European Union, United Nations

**Аңдатпа.** Соңғы онжылда тұрақты даму жаһандық басқарудың басты бағытына айналып, қоршаған ортаны сақтау, экономикалық өрлеу және әлеуметтік теңдікті ұштастыруда маңызды рөл атқарды. Бұл мақалада тұрақты дамудың теориялық негіздері қарастырылып, оның алғашқы халықаралық тұжырымдамалардан бастап Еуропалық Одақтың (ЕО) саясатына қалай енгені зерттеледі. Зерттеу барысында ЕО-ның тұрақты даму тәсілі Біріккен Ұлттар Ұйымының (БҰҰ) тұжырымдамасымен салыстырылып, ЕО-ны аймақтағы тұрақтылық көшбасшысы ететін ерекше механизмдер мен стратегиялар талданады. Әсіресе, ЕО-ның тұрақты даму мақсаттарын (ТДМ) өз келісімдеріне, директиваларына және стратегияларына, соның ішінде Еуропалық жасыл келісім мен «Fit for 55» пакетін қамту арқылы қалай енгізгеніне назар аударылады. Сондай-ақ, ЕО-ның тұрақты даму саласындағы жұмысын бағыттайтын құралдар мен қағидаттар, атап айтқанда, сақтық қағидаты, саясаттың үйлесімділігі және Eurostat-тың ТДМ есептері сияқты мониторинг жүйелері талқыланады. ЕО-ның жетістіктеріне қарамастан, мүше мемлекеттер арасындағы теңсіздіктер мен геосаяси қысымдар сияқты қиындықтар сақталуда. Бұл зерттеу ЕО-ның тұрақты даму саласындағы жаһандық рөлін күшейтуге бағытталған ұсыныстармен аяқталады, онда саясаттық инновацияларды дамыту, халықаралық ынтымақтастықты арттыру және БҰҰ-ның тұжырымдамаларымен үйлестірудің маңыздылығы атап өтіледі. Осы зерттеу нәтижелері тұрақты даму мақсаттарына жетуде сенімді қадамдар жасап келе жатқан Қазақстан үшін де практикалық маңызға ие.

**Түйін сөздер:** тұрақтылық, тұрақты даму, тұрақты даму мақсаттары (ТДМ), Еуропалық Одақ, Біріккен Ұлттар Ұйымы

**Аннотация.** В последнее десятилетие устойчивое развитие стало краеугольным камнем глобального управления, объединяющим сохранение окружающей среды, экономического прогресса и социальной справедливости. В этой статье исследуются теоретические основы устойчивого развития, прослеживается его

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эволюция от ранних международных рамок до его интеграции в политику Европейского союза (ЕС). Сравнивая подход ЕС к устойчивому развитию с подходом Организации Объединенных Наций (ООН), данное исследование подчеркивает отдельные механизмы и стратегии, которые позиционируют ЕС как регионального лидера в области устойчивого развития. Особое внимание уделяется тому, как ЕС включил цели устойчивого развития в свои договоры, директивы и стратегии, включая Европейскую зеленую сделку и пакет Fit for 55. В статье также рассматриваются инструменты и принципы, направляющие усилия ЕС, такие как принцип предосторожности, согласованность политики и надежные системы мониторинга, отчеты Евростата о ЦУР. Несмотря на прогресс ЕС, проблемы сохраняются, включая неравенство между государствами-членами и геополитическое давление. Исследование завершается рекомендациями по усилению глобальной роли ЕС в устойчивом развитии, подчеркивая важность политических инноваций, международного сотрудничества и согласования с рамками ООН для решения возникающих глобальных проблем. Данные выводы имеют практическое значение для Казахстана, который делает уверенные шаги по достижению целей устойчивого развития.

**Ключевые слова:** Устойчивость, Устойчивое развитие, Цели устойчивого развития (ЦУР), Европейский Союз, Организация Объединенных Наций

## Introduction

Sustainable development has become a critical framework for addressing the interconnected challenges of environmental degradation, economic inequality, and social instability. Originating from global efforts such as the Stockholm Conference (1972) and the Brundtland Report (1987), the concept emphasizes meeting the needs of present generations without compromising the ability of future generations to meet their own. The United Nations (UN) has institutionalized this vision through the Sustainable Development Goals (SDGs), providing a universal agenda for global sustainability.

The European Union (EU) has emerged as a leading actor in advancing sustainable development, integrating its principles into regional policies and strategies. From the Maastricht Treaty to the European Green Deal, the EU has sought to balance environmental preservation with economic growth and social equity, tailoring global goals to its regional context. Unlike the UN, which relies on voluntary commitments, the EU employs binding policies, robust monitoring mechanisms, and extensive funding instruments to achieve its sustainability targets. This paper examines sustainable development from a theoretical perspective before delving into the EU's unique approach to implementing the concept. It explores the distinctions between the UN and EU frameworks, analyzing how the EU has integrated sustainable development into its policies and mechanisms. By evaluating the effectiveness of these strategies, the research sheds light on the EU's contributions to global sustainability while

addressing challenges and proposing actionable recommendations for future progress. Achieving sustainable development goals is a national priority for the Republic of Kazakhstan. The implementation of the principles of the Sustainable Development Goals is aimed at improving the quality of life of the population, adopting the best international standards, and enhancing the international image of the country.

Kazakhstan has made significant progress in its quest to achieve the SDGs. The country has laid a strong legislative foundation by integrating the SDGs, namely their 87 key indicators, into its state planning system. In 2024 an updated List of National Indicators of the Sustainable Development Goals until 2030 of the UN Sustainable Development Agenda and the Plan for the preparation of the 2025 Voluntary National Review were adopted in the Republic. Due to geopolitical and geoeconomics difficulties in the world in recent years, further implementation of sustainable development goals in Kazakhstan has been experiencing certain difficulties. Overcoming risks and problems on the way to achieving the set goals requires a deep analysis of the situation within the country, as well as studying international experience in implementing the SDGs. In this context, the study of the features, instruments and future implementation of the EU SDGs is of particular conceptual and practical interest.

## Methodology

In researching the topic emphasis was placed on the concepts of sustainable development in the global academic community which are generally recognized

and actually operational in considering issues of sustainable development both at the national and international levels. Understanding sustainable development as a whole as a continuous process of meeting the needs of present and future generations emphasizes the multidimensionality and diversity of goals, subjects and instruments of implementation. At the same time, the peculiarities of the perception of sustainable development issues at the level of the European Union and the implementation of their key goals were particularly highlighted by us in the article.

The main method of analysis of the selected problem was a desk study. System analysis and comparative method were used to determine the main logic and line of the research. Content analysis and discourse analysis were applied for scientific processing of the primary sources.

### Discussion and Conclusions

Although the concept has existed for centuries, particularly within indigenous cultures, its modern definition was formally introduced in the 1987 Brundtland Report, *Our Common Future*. It was subsequently popularized and widely endorsed by global leaders during the 1992 Rio Earth Summit. Sustainable development is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" [1]

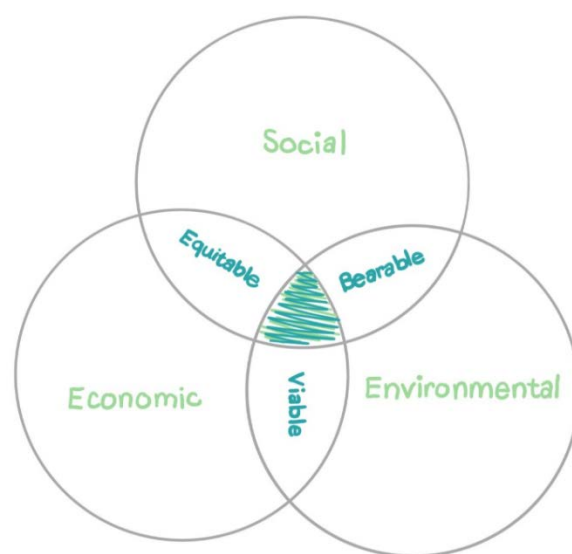
John Elkington founder of Sustainability, a British consultancy firm, defined the economic, environmental, and social aspects of company's sustainable development as "Triple bottom line" which commonly known as "Three pillars". As for the first bottom line, the Economic Dimension focuses on the need for economic growth that is sustainable and equitable. As the Brundtland Commission emphasized that economic development should not only aim for growth but also consider the long-term impacts on the environment and society. It argued for a "changing the quality of growth," which means that economic activities should account for their environmental and social costs. The goal is to create a healthy economy that provides jobs and improves living standards without depleting natural resources

Secondly, the environmental aspect of sustainable development stresses the importance of conserving natural resources and protecting ecosystems. The Earth Summit in 1992 highlighted the need for policies that integrate environmental protection with economic and social development. This dimension recognizes that the health of the planet is essential for the well-being of current and future generations, and it calls for sustainable practices that minimize ecological footprints and promote biodiversity.

Moreover, the social dimension emphasizes equity, justice, and the well-being of all individuals. It seeks to address issues such as poverty, inequality, and access to resources. The Brundtland Commission pointed out that sustainable development must prioritize the basic needs of the world's poor, ensuring that all people have the opportunity to improve their quality of life. This dimension advocates for inclusive decision-making processes that involve all stakeholders, particularly marginalized communities.

Figure 1. represents the three pillars of sustainable development—social, economic, and environmental—and their interdependence. Achieving effective sustainable development requires a paradigm shift in thinking to balance these dimensions harmoniously [2]

**Figure 1. Three pillars of sustainable development**



Source: [3]

As for the historical background of the concept, its roots to the growing awareness of environmental issues and their

interconnection with social and economic systems during the early 1970s. Two pivotal moments in this era laid the foundation for sustainable development: the United Nations Conference on the Human Environment (Stockholm Conference) held in 1972 and Christopher Stone's seminal article, "Should Trees Have Standing? Toward Legal Rights for Natural Objects." These events not only expanded the global environmental discourse but also introduced innovative ways of thinking about humanity's relationship with the natural world. Stockholm Conference (5–16 June 1972) which addressed environmental issues at a global scale. It highlighted the environmental degradation caused by industrialization, population growth, and unsustainable resource use. More importantly, it underscored the inseparability of environmental and socioeconomic issues, setting the stage for what would later become sustainable development. [4] In the same year, Christopher Stone's article "Should Trees Have Standing?" introduced a transformative legal and ethical framework for environmental protection. Stone argued that natural objects, such as trees, rivers, and ecosystems, should be granted legal rights[5] This was a revolutionary idea, challenging the anthropocentric view that nature exists solely for human exploitation. Stone's proposal aimed to create a legal mechanism where nature could have standing in court, represented by guardians to advocate for its interests. Stone's work resonated with the ethical underpinnings of the Stockholm Conference, which recognized the intrinsic value of nature. His ideas expanded the concept of sustainability by emphasizing the moral responsibility to preserve ecosystems not just for human benefit but for their inherent worth [6] The principles Stone championed—such as intergenerational equity and the precautionary principle—are integral to the sustainable development framework that would emerge in the decades following. The UN conference produced the Stockholm Declaration, which introduced the notion that environmental health is essential for human well-being and economic development. It emphasized the need for a balanced approach, recognizing both the right to development and the obligation to protect the environment for future generations. This was

complemented by an Action Plan that identified key environmental challenges and proposed measures for pollution control, biodiversity preservation, and resource management. The establishment of the United Nations Environment Programme (UNEP) as an outcome of the conference institutionalized these ideas, signaling the global commitment to addressing environmental concerns in tandem with development goals. The Stockholm Conference provided the political and institutional foundation for addressing global environmental challenges, while Christopher Stone's work offered a philosophical and legal perspective on humanity's relationship with nature. Together, they planted the seeds for the concept of sustainable development by advocating for a harmonious balance between economic growth, social equity, and environmental preservation. These ideas would later be crystallized and given a formal definition in the Report of World Commission for the Environment and Development (WCED) - so called Brundtland Report, which built upon the legacies of Stockholm and Stone to propose a holistic vision for global development. The accurate definition of sustainable development outlined in the WCED report highlights four key elements: 1) addressing the needs of both present and future generations; 2) acknowledging limitations in resource exploitation and other activities to ensure sustainability; 3) emphasizing intergenerational justice in the equitable distribution of rights and responsibilities; and 4) adopting an integrated approach to environmental and developmental challenges. [7]. Attempts to determine the legal status of the concept of sustainable development appeared mainly in the doctrine of international law almost immediately after the announcement of the WCED Report. The approach taken by those relying on the Brundtland report formulation for meaning is to infer in the concept either a utilitarian perspective, anthropocentric and a development-orientated view of our environmental resources. [8]. Other disciplines of law, as well as representatives of other disciplines also have taken it up, such as political scientists, geographers, sociologists, or economists. The major milestone can be traced back to the Earth Summit, held in 1992 in Rio de Janeiro, is



widely regarded as a watershed event in the sustainable development movement. Researchers emphasize that it was significant not only for bringing together an unprecedented number of countries and organizations but also for facilitating compromises on complex issues related to the environment and development. The summit resulted in the adoption of the Rio Declaration, which established 27 principles aimed at achieving global sustainability, reflecting a compromise between the interests of developed and developing nations. One of the key outcomes of the Earth Summit was Agenda 21, a comprehensive plan that called for specific actions to address environmental and developmental challenges. This agenda highlighted the need for local communities to adopt and implement sustainable practices, thereby moving the discussion of sustainability from theory to actionable initiatives. Researchers note that the principles and frameworks established during the Earth Summit have had a lasting impact, influencing national and local policies aimed at promoting sustainable development worldwide. The International Court of Justice (ICJ) identify sustainability as a regulatory tool for activities and hold that what the concept denotes at any given time will depend on its context in an instrument [8]. Afterwards, the Johannesburg Summit, officially known as the World Summit on Sustainable Development, took place in 2002. This summit reaffirmed the global commitment to sustainable development and aimed to address pressing issues such as poverty, inequality, and environmental degradation. At the summit, leaders from around the globe recognized the need for a comprehensive approach to sustainable development that integrates economic, social, and environmental dimensions. They emphasized the importance of building a humane, equitable, and caring global society, acknowledging that human dignity is essential for sustainable development. The summit also resulted in the adoption of the Johannesburg Plan of Implementation, which outlined specific actions and commitments to achieve sustainable development goals, including the promotion of sustainable livelihoods and the management of natural resources. This plan aimed to accelerate the implementation of

Agenda 21 and the outcomes of the Earth Summit, focusing on practical measures to improve the quality of life for all people while ensuring the protection of the environment. Critics of the Johannesburg Summit have raised several concerns regarding its effectiveness and the implementation of its outcomes. One major critique is that, despite the ambitious declarations made during the summit, there has been a significant gap between rhetoric and action. For instance, Dr. Mostafa Kamal Tolba noted that many of the lofty declarations and ambitious plans adopted at the summit have not been effectively implemented, leading to skepticism about the commitment of world leaders to sustainable development goals. In 2015, the Sustainable Development Goals (SDGs) were adopted as part of the 2030 Agenda for Sustainable Development, which represents a significant global commitment to addressing pressing challenges. The United Nations established 17 SDGs aimed at tackling critical issues such as poverty, inequality, and climate change, emphasizing the need for a comprehensive approach to development that integrates economic, social, and environmental dimensions. The SDGs highlight the importance of inclusivity and partnerships across nations, recognizing that sustainable development requires collaboration among various stakeholders, including governments, civil society, and the private sector. This collaborative approach is essential for achieving the ambitious targets set forth in the SDGs, as it fosters shared responsibility and collective action to create a more equitable and sustainable world. One of the primary challenges in achieving sustainable development is the interconnectedness of global systems, which requires a nuanced understanding of how economic, social, and environmental factors influence one another. Sustainability is a systemic issue, meaning that what happens in one nation, sector, or industry has impacts on others[8]. This complexity necessitates humility and a collaborative approach among nations, as the dynamics of poverty, inequality, and environmental degradation do not respect national borders. For instance, technological innovations in renewable energy can mitigate the impacts of climate change, while early interventions in conflict zones can prevent long-term poverty. Despite the ambitious goals set forth

in the SDGs, significant obstacles remain. The persistent gap between rich and poor nations exacerbates global inequalities, and the ongoing degradation of natural resources threatens the very foundation of sustainable development. Moreover, the effects of climate change, such as biodiversity loss and increased natural disasters, disproportionately affect developing countries, which often lack the resources to adapt effectively. To address these challenges, it is crucial to foster a political and economic environment that prioritizes sustainability. This includes integrating environmental considerations into economic decision-making and ensuring that policies are inclusive and equitable. The emphasis on evidence-based decision-making is vital, as accurate data can inform policies that address the unique needs of different populations, particularly marginalized groups.

Furthermore, the role of education and public awareness cannot be overstated. Sustainable development requires a collective effort from all sectors of society, including governments, businesses, and individuals, to adopt practices that promote environmental stewardship and social equity. As the discourse around sustainable development continues to evolve, it is essential to maintain a focus on the interconnectedness of its pillars-economic, social, and environmental-to create a holistic approach that can adapt to the changing global landscape.

In conclusion, while the path to sustainable development is fraught with challenges, it also presents opportunities for innovation and collaboration. By prioritizing inclusivity, leveraging technology, and fostering a culture of sustainability, the global community can work towards a future that is equitable and resilient for all.

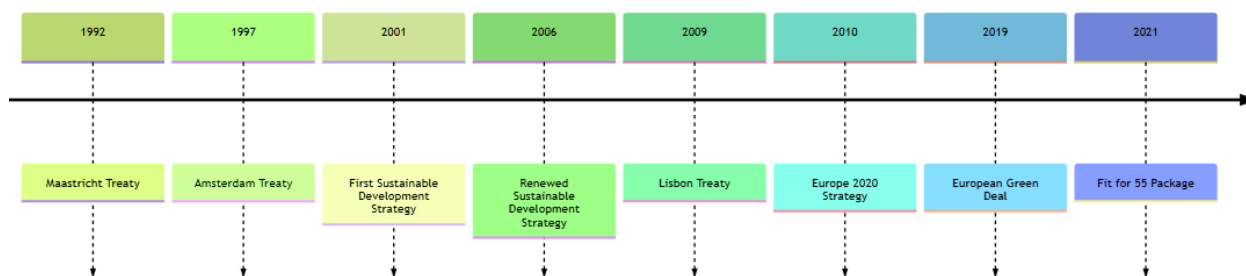
After the solid definition of sustainable development in the Brundtland

Report, the integration of concept into EU policy began with the Maastricht Treaty in 1992, which emphasized the importance of sustainable development for the Union. This treaty laid the groundwork for future EU policies by highlighting the need for a balance between economic growth, social equity, and environmental protection [9].

As shown in the Figure 2, the Amsterdam Treaty further reinforced this commitment by explicitly linking sustainability with environmental protection in 1997. This treaty built upon the foundations laid by the Maastricht Treaty, ensuring that sustainable development became a guiding principle for EU actions and policies, which is marked as a significant step in recognizing sustainable development as a key objective of the EU, influencing subsequent treaties and policies [10].

In 2001, the EU launched its first sustainable development strategy at the Gothenburg Summit, which set objectives for addressing key challenges such as climate change, sustainable transport, and public health [10]. This strategy called for a more integrated approach to policy-making. The first strategy formed the core of the EU's policies towards sustainable development setting objectives and defining actions for seven key challenges for the period until 2010: 1) climate change and clean energy; 2) sustainable transport; 3) sustainable consumption and production; 4) conservation and management of natural resources; 5) public health; 6) social inclusion, demography and migration; 7) global poverty and sustainable development challenges. In addition, a more integrated approach to policy-making was proposed, to improve synergies and reduce trade-offs. The external dimension of sustainable development like global resource use, international development concerns, etc., was also introduced into EU internal policy making [11].

**Figure 2. Timeline of EU Sustainable Development Milestones**



Source: provided by authors

As a further development, the European Union's 2005 guiding principles for sustainable development establish a comprehensive framework for achieving its sustainability goals by integrating key values into policymaking. These principles underscore the EU's commitment to balancing environmental, social, and economic considerations in its policies and initiatives. For instance, the principle of Promotion and Protection of Fundamental Rights ensures that sustainable development efforts are aligned with human rights, guaranteeing that all actions respect and promote fundamental freedoms. Similarly, Intra-and Intergenerational Equity emphasizes solidarity within and between generations, addressing present needs while safeguarding the ability of future generations to meet theirs. On the other hand, the Renewed Sustainable Development Strategy of the European Union, adopted in 2006, aimed to address the persistent unsustainable trends identified in the original strategy from 2001. This renewed strategy recognized the need for a gradual change in consumption and production patterns and emphasized a more integrated approach to policy-making [12]. It reaffirmed the importance of global solidarity and highlighted the necessity of strengthening the EU's collaboration with partners outside the Union. Furthermore, the Lisbon Treaty, which came into force in 2009, marked a significant evolution in the European Union's (EU) approach to sustainable development policy integration. It explicitly recognized sustainable development as a fundamental goal of the EU, integrating it into the broader framework of EU policies and strategies. The concept of "balanced and sustainable"

development as stated in Article 3 [9] of the Treaty on European Union (TEU) emphasizes the importance of sustainable development in relation to economic growth, social progress, and environmental protection, thereby establishing a legal basis for its implementation across various policy areas [10]. The evolution of sustainable development policy integration continued with the adoption of the Europe 2020 strategy in 2010, which built upon the foundations laid by the Lisbon Treaty and the renewed Sustainable Development Strategy. Europe 2020 aimed to promote smart, sustainable, and inclusive growth, reinforcing the interconnectedness of economic, social, and environmental policies. This strategy further emphasized the need for a coordinated approach to achieve sustainability targets, integrating them into the EU's broader economic policies and initiatives [9]. The Union's effort continued by the European Green Deal, is adopted in December 2019, represents a comprehensive strategy aimed at making the EU the first climate-neutral continent by 2050. It sets ambitious targets, including a net reduction of at least 40% in greenhouse gas emissions by 2030, an increase to a 32% share for renewable energy, and a 32.5% improvement in energy efficiency. The Green Deal emphasizes that achieving these goals requires significant investments, estimated at €260 billion per year until 2030, which is about 1.94% of the EU's annual GDP in 2020 [13]. It also highlights the importance of integrating social fairness and environmental progress, asserting that economic growth, social equity, and environmental sustainability are compatible and mutually reinforcing.

Figure 3. Linkage between each SDG to specific EGD policies.

The Global Goals for Sustainable Development - Agenda 2030		The European Green Deal								
		P1 Biodiversity	P2 From Farm to Fork	P3 Sustainable agriculture	P4 Clean energy	P5 Sustainable industry	P6 Building and renovating	P7 Sustainable mobility	P8 Eliminating pollution	P9 Climate action
Goal 1 - No Poverty										
Goal 2 - Zero Hunger										
Goal 3 - Good Health & Well Being										
Goal 4 - Quality Education										
Goal 5 - Gender Equality										
Goal 6 - Clean Water & Sanitation										
Goal 7 - Affordable & Clean Energy										
Goal 8 - Decent Work & Economic Growth										
Goal 9 - Industry, Innovation & Infrastructure										
Goal 10 - Reduced Inequalities										
Goal 11 - Sustainable Cities & Communities										
Goal 12 - Responsible Consumption & Production										
Goal 13 - Climate Action										
Goal 14 - Life Below Water										
Goal 15 - Life On Land										
Goal 16 - Peace Justice & Strong Institutions										
Goal 17 - Partnerships for the Goals										

Source: [14]

Dark green—clear correlation between EGD Policies and SDGs; light green—indirectly derived relationship between EGD Policies and the SDGs; white cells—weak or no apparent relationship.

At the heart of the EU's sustainability agenda is the European Green Deal, which aims to make Europe the first climate-neutral continent by 2050. This ambitious strategy addresses key SDGs such as climate action (SDG 13), sustainable industry (SDG 9), and responsible consumption and production (SDG 12). It promotes clean energy, sustainable mobility, biodiversity conservation, and the transition to a circular economy. Another cornerstone of the EU's efforts is the focus on inclusive and equitable quality education (SDG 4), which is essential for reducing poverty (SDG 1) and improving health and well-being (SDG 3). By addressing these interconnected goals, the EU seeks to tackle systemic inequalities and foster long-term development (Figure 3). Following the Green Deal, the Fit for 55 Package was introduced in 2021 as part of the EU's regulatory framework to achieve its climate goals. This package includes a set of legislative proposals aimed at reducing net greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels [4]. It encompasses revisions to existing directives, such as the Renewable Energy Directive and the Energy Efficiency Directive, to enhance the EU's climate policies and ensure that all member states contribute effectively to the overarching goal of climate

neutrality. According to [13], the connection between these two goals, including the cost-benefit impacts on all citizens, needs to be more explicitly defined. Without a clear understanding of the consequences of each action, along with robust quantitative indicators for the environmental, economic, and social sustainability pillars, achieving these goals remains highly uncertain. In the context of ongoing global challenges and issues within and around the European Union, implementing the Green Deal without these necessary adjustments could jeopardize sustainable development and the unity of the EU. A transition to climate neutrality can only be sustainable if it is grounded in shared conviction and consensus. The implementation of the SDGs heavily relies on member states, which play a crucial role in translating these goals into actionable strategies. Many have updated their National Development Plans or introduced new frameworks aligned with the SDGs, often linking them directly to national budgets to ensure accountability. Approximately half of the EU member states have operational strategies integrating the SDGs into governance systems. High-level coordination mechanisms, often led by prime ministers or central government bodies, ensure horizontal policy coherence by



aligning efforts across ministries and sectors. This approach enables member states to address interconnected challenges, such as economic resilience, inequality, and environmental sustainability, in a comprehensive manner. To monitor progress, the EU has established robust governance and tracking frameworks. Member states regularly evaluate their achievements using SDG-aligned indicators, identifying gaps and informing evidence-based policymaking. At the EU level, the European Semester—a framework initially designed for coordinating economic policies—has been expanded to include social and environmental dimensions. This ensures sustainability is integrated into economic monitoring and that SDG priorities are maintained at both national and regional levels. Collaboration and stakeholder engagement are integral to the EU's approach. Platforms like the Multi-stakeholder Platform on SDGs bring together civil society, businesses, and governmental organizations to foster dialogue, share best practices, and provide advice on SDG implementation. Inter-departmental working groups and task forces further enhance policy coherence, while the Council of the European Union emphasizes the importance of cultural cooperation in sustainable development, encouraging evidence-based strategies that link culture and sustainability. These mechanisms ensure that national and EU-wide strategies are well-coordinated and mutually reinforcing. The EU employs diverse funding instruments to support its sustainable development goals. The European Green Deal Fund is a cornerstone of this effort, facilitating the transition to a climate-neutral economy by 2050. It provides financial support to regions and industries heavily reliant on fossil fuels, focusing on innovation, renewable energy, sustainable agriculture, and energy efficiency. By offering grants, loans, and guarantees, the fund ensures an inclusive green transition. Additionally, the EU budget allocation channels significant resources toward sustainability through programs such as Horizon Europe, the Cohesion Fund, and the Common Agricultural Policy. These initiatives integrate sustainability into research, development, and regional support. The EU also encourages private sector involvement through public-private

partnerships (PPPs), green bonds, and investment platforms like InvestEU, leveraging private capital to complement public funding and scale sustainable development projects. The EU's approach to sustainable development is guided by key principles that shape policy design and implementation. The Precautionary principle emphasizes proactive action in the face of uncertainty, ensuring environmental risks are addressed before harm occurs. (Humphreys, 2017). This principle is central to regulations on emissions, chemical safety, and biodiversity conservation. Moreover, the Polluter-Pays principle mandates that those responsible for pollution bear the costs of mitigation, driving policies such as carbon pricing and environmental taxes to incentivize cleaner practices. It is key for economic regulation to achieve environmental policy objectives [8]. It's most visible in the EU system for greenhouse gas (GHG) emission allowance trading (EU ETS) in order to promote reduction (European Union, 2003). The EU uses ETS to meet obligations under the Kyoto protocol to the Climate Change Convention. The principle of Intergenerational Equity ensures that current actions do not compromise the well-being of future generations, a commitment embedded in long-term strategies like the European Green Deal and the 2030 Climate Target Plan. The analysis of the EU's system on public participation alongside the fundamental rights reveals there is successful incorporation of the Rio Declaration Principle 10 and the Aarhus Convention provisions into EU law promoting social aspect of sustainability [8]. To ensure transparency and accountability, the EU employs advanced monitoring tools. +Eurostat SDG Reports provide detailed annual analyses of the EU's performance across all 17 SDGs, identifying trends and challenges while evaluating the effectiveness of policies. National Energy and Climate Plans (NECPs), submitted by member states every ten years, outline strategies for renewable energy adoption, emissions reductions, and energy efficiency improvements, offering roadmaps for achieving national and EU-wide climate targets. Analysis reveals that international concept and principle of sustainable development is capable of application at regional level, and specifically in the EU [8].

By aligning funding instruments, guiding principles, and monitoring tools, the EU creates a cohesive framework for sustainable development. Its comprehensive strategy combines ambitious governance, innovative policies, and inclusive collaboration to address the interconnected challenges of economic, social, and environmental sustainability. This approach underscores the EU's commitment to building a sustainable, equitable, and resilient future, ensuring that no one is left behind in the development process.

#### *Comparison between the UN and EU Sustainable Development Frameworks*

The UN and EU frameworks for sustainable development share a common vision but diverge significantly in their scope, methods, and enforceability, reflecting their respective global and regional contexts. At the core of both frameworks is the shared goal of promoting sustainable development, yet their approaches to achieving this aim differ in important ways. The United Nations' Sustainable Development Goals (SDGs) provide a universally inclusive framework that is designed to address a wide range of global challenges, including poverty (Goal 1), climate action (Goal 13), and inequality (Goal 10). These SDGs reflect a broad, aspirational agenda meant to guide international efforts towards sustainability over the course of the 21st century. The SDGs emphasize voluntary commitments, enabling nations to prioritize their goals according to their specific needs, capacities, and national circumstances. This flexibility is seen as a strength in terms of fostering global participation. However, the broad and non-binding nature of the SDGs often leads to inconsistent or uneven implementation across different regions, as some countries may lack the political will, financial resources, or institutional capacity to fully commit to the [17].

In contrast, the European Union (EU) has tailored the SDGs to fit its regional context, effectively integrating them into legally binding policies that aim to achieve long-term sustainability in the European region. A notable example of this is the European Green Deal, a comprehensive policy framework that sets ambitious targets for climate neutrality by 2050 and advocates for a transition to a circular economy. By

enacting binding legislation, such as the EU Emissions Trading System and the Clean Energy for All Europeans package, the EU ensures that sustainability goals are operationalized within its member states through clear legal frameworks, enforceable regulations, and measurable targets [18]. The EU's region-specific adaptation of the SDGs highlights the importance of enforceable mechanisms in ensuring accountability, as the regulatory frameworks directly impact national policies and are subject to penalties for non-compliance. This binding approach offers a more concrete pathway to achieving sustainability compared to the UN's aspirational, voluntary framework. Additionally, the EU's robust monitoring and enforcement mechanisms provide a replicable model for other regions to follow in translating global sustainability goals into effective, localized policies. The UN and EU also differ substantially in their implementation mechanisms. The UN primarily relies on multilateral partnerships, collaboration, and "soft law" instruments to encourage the adoption of sustainable practices. Initiatives like the Global Partnership for Sustainable Development encourage cooperation between governments, non-governmental organizations (NGOs), the private sector, and other stakeholders to tackle pressing global challenges. These partnerships aim to provide financial, technical, and policy support for developing countries to meet their sustainable development objectives. However, the absence of binding legal instruments or enforcement mechanisms means that implementation is often voluntary, leading to inconsistent progress among nations, especially in the Global South [19]. On the other hand, the EU's approach integrates sustainability into its legislative agenda through enforceable policies and regulations. Programs like the Fit for 55 package, which targets a 55% reduction in greenhouse gas emissions by 2030, mandate specific emissions reductions for various sectors. Financial instruments like NextGenerationEU also provide targeted funding to support green transitions, ensuring that member states have the financial means to invest in sustainable initiatives. This regulatory framework ensures that progress towards sustainability goals is not left to the discretion of individual

nations,[20] but is instead governed by legally binding obligations. The EU's approach highlights the power of regulatory policies in driving large-scale, systemic change, offering an example of how regional frameworks can make substantial contributions to global sustainability efforts. Analyses of sustainable development in the EU's external relations reveal that the EU has made evident efforts to integrate sustainable development objectives into its external policies. However, its approach often appears more symbolic, fulfilling Treaty requirements by promoting sustainable development objectives without ensuring their enforcement [8].

Monitoring and accountability mechanisms are another area where the UN and EU frameworks diverge significantly. The UN tracks the progress of the SDGs through Voluntary National Reviews (VNRs), which allow countries to self-report their progress towards achieving the goals. While this system fosters transparency and encourages cross-country learning, it relies heavily on national governments' willingness and ability to report accurately and comprehensively. Furthermore, the lack of standardized reporting criteria across countries means that the data collected through VNRs may not be comparable or reliable, undermining the effectiveness of the monitoring process [17]. In contrast, the EU employs a more rigorous and centralized approach to monitoring its sustainability initiatives. Through institutions like Eurostat, the EU collects and analyzes standardized data from member states, which allows for consistent and reliable tracking of progress towards environmental targets. This centralized data collection enables the EU to identify discrepancies, assess the effectiveness of its policies, and make adjustments when necessary to ensure that its sustainability goals are met. Moreover, the EU's reliance on robust, evidence-based policymaking through its monitoring systems provides a strong foundation for informed decision-making and accountability. While the UN's VNR system promotes inclusivity and allows for a broad range of countries to participate in the sustainable development process, its lack of standardization and enforcement mechanisms is a significant limitation. The EU's centralized and comprehensive monitoring systems set a

high standard for accountability, serving as a model for other regions seeking to implement sustainable development frameworks.

In conclusion, while the UN and EU frameworks for sustainable development reflect complementary strengths, they also highlight the importance of both global coordination and localized enforcement. The UN excels in providing a universal vision and fostering global cooperation, which is crucial for addressing the complex, interconnected challenges of sustainable development on a global scale. The SDGs, with their emphasis on inclusivity and voluntary commitment, encourage participation from a diverse range of countries, making them an essential framework for tackling global issues. However, the EU's model demonstrates the effectiveness of integrating sustainability into regional governance structures through enforceable policies and robust monitoring mechanisms. The EU's ability to translate global sustainability goals into actionable and measurable policies within its member states provides a valuable example of how region-specific approaches can drive meaningful progress. Together, these two frameworks emphasize the need for a dual model: a universal, globally coordinated effort to address shared challenges, paired with localized enforcement and monitoring systems that ensure accountability, transparency, and tangible outcomes.

### Conclusion

The European Union (EU) has established itself as a global leader in sustainable development by integrating ambitious policies, robust regulatory frameworks, and comprehensive monitoring mechanisms. Through initiatives such as the European Green Deal and the Fit for 55 Package, the EU has successfully embedded sustainability into its economic, environmental, and social policies. The EU's adoption of binding legislation, financial instruments, and governance principles, including the Precautionary Principle and Polluter-Pays Principle, has facilitated a structured approach to achieving sustainable development. However, despite these efforts, challenges persist, including economic disparities among member states, geopolitical uncertainties, and implementation gaps. Kazakhstan, in its pursuit of the Sustainable Development

Goals (SDGs), has made notable progress by incorporating key sustainability indicators into state planning. However, as the country navigates geopolitical and economic challenges, further integration of sustainability principles remains essential. The EU's experience offers valuable insights that Kazakhstan can adapt to strengthen its sustainable development framework. One key area for improvement lies in institutional governance and policy integration. To ensure sustainability policies are effectively implemented, Kazakhstan should develop a comprehensive national sustainable development strategy that aligns sectoral policies with long-term sustainability objectives. Establishing a centralized coordination body, similar to the EU's governance model, would facilitate better policy coherence, inter-ministerial collaboration, and streamlined decision-making.

Financial mechanisms also play a crucial role in driving sustainable development. Kazakhstan should expand green financing tools, such as green bonds, sustainability-linked loans, and investment incentives for renewable energy projects. Encouraging public-private partnerships (PPPs) would help mobilize additional resources for sustainable infrastructure and technological innovation. By fostering a regulatory environment that attracts both domestic and international investments in green initiatives, Kazakhstan can accelerate its transition toward a more sustainable economy.

Enhancing monitoring and accountability systems is equally critical for achieving meaningful progress. Implementing a national SDG tracking and reporting system, inspired by Eurostat's SDG Reports, would enable Kazakhstan to assess policy effectiveness and identify gaps. Additionally, strengthening regional cooperation within Central Asia could facilitate the creation of a shared sustainability monitoring framework, fostering data transparency and cross-border collaboration in achieving the SDGs. Given Kazakhstan's resource-rich economy, the advancement of renewable energy and technological innovation should be a priority. Investments in solar, wind, and hydroelectric power can reduce reliance on fossil fuels and support the country's decarbonization efforts. Establishing strategic partnerships

with the EU for technology transfer and research collaboration would further enable Kazakhstan to adopt cutting-edge sustainable solutions, improving energy efficiency and reducing environmental impact. Finally, fostering public awareness and stakeholder engagement is essential for ensuring long-term sustainability. Integrating sustainability education into the national curriculum can help cultivate an environmentally conscious society, while promoting civil society participation in sustainability policymaking would ensure a more inclusive approach to decision-making. Transparent governance mechanisms that involve businesses, NGOs, and local communities in sustainability efforts would contribute to more effective and widely supported policies. By implementing these strategic measures, Kazakhstan can enhance its sustainable development trajectory while ensuring long-term economic resilience, environmental protection, and social equity. The EU's experience underscores the importance of strong governance, financial innovation, and stakeholder engagement, all of which can be adapted to Kazakhstan's national context. Through localized strategies and strengthened international cooperation, Kazakhstan can accelerate its progress toward sustainable development and position itself as a regional leader in sustainability.



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**ЕО-НЫҢ ТҰРАҚТЫ ДАМУ МАҚСАТТАРЫН ІСКЕ АСЫРУДАҒЫ ТӘЖІРИБЕСІ: ТӘСІЛДЕРДІҢ ЕРЕКШЕЛІКТЕРІ МЕН АРТЫҚШЫЛЫҚТАРЫ**

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#### ОПЫТ ЕС В РЕАЛИЗАЦИИ ЦЕЛЕЙ УСТОЙЧИВОГО РАЗВИТИЯ: ОСОБЕННОСТИ И ПРЕИМУЩЕСТВА ПОДХОДОВ

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