

SUSTAINABLE DEVELOPMENT MANAGEMENT: CONCEPTUAL BASIS AND PRINCIPLES IN THE CONTEXT OF INTERNATIONAL INTEGRATION

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Sustainable development is defined as a model of development for countries and regions that encompasses economic growth, production, and consumption within the limits of ecological sustainability. This implies that societal activities must conform to the capacity of ecosystems for regeneration, pollution assimilation, and the sustenance of both present and future generations. During the 1950s and 1960s, development was predominantly equated with economic progress and the enhancement of economic efficiency. However, in the early 1970s, due to the inequitable distribution of income and the escalating poverty in developing nations, issues of social justice gained parity with those of economic efficiency. The escalating consumption of natural resources precipitated environmental degradation and adversely affected human health. The problem of 'limits to growth,' highlighted by the Club of Rome in 1972, emerged as a tangible threat to the global community. To avert an ecological crisis, it was imperative to integrate environmental conservation into the development paradigm. This issue was first articulated at the United Nations Conference on the Human Environment (1972, Stockholm), which acknowledged the urgency of environmental concerns and the necessity for establishing effective international mechanisms to address them. The term 'sustainable development' was introduced in 1980 with the publication of the 'World Conservation Strategy' (WCS), authored by the International Union for Conservation of Nature (IUCN). This strategy proposed a novel concept: nature conservation is inextricably linked to development issues. Societal development must proceed with due consideration for nature preservation. The concept of 'sustainable development' gained widespread currency following the 1987 publication of the report 'Our Common Future' by the World Commission on Environment and Development, under the leadership of G. H. Brundtland. The sustainable development concept attained preeminent status after the United Nations Conference on Environment and Development (1992, Rio de Janeiro) and was enshrined in the conference's 'Agenda 21' document [8].

The global community has acknowledged that balanced development must constitute a pivotal component of international cooperation. It is widely recognized that balanced development entails the harmonious integration of economic, social, and environmental dimensions. Only the attainment of equilibrium among these dimensions will facilitate the transition to a societal development trajectory that does not deplete natural and human resources, thereby ensuring its sustainability. In the Ukrainian language, the term 'stalyi rozvytok' (sustainable development) has gained prevalence, which is a consequence of translating the Russian term 'ustoychivoye razvitiye' rather than directly translating from English. This term has been enshrined in Ukrainian legislation, despite its combination of words with opposing connotations (stalyi – stability, rozvytok – change). The concept of balanced development emerged as a response to contemporary challenges. It serves as an alternative to the dominant development model, which views nature solely as a source of raw materials for production.

The attainment of sustainable development necessitates not merely technical solutions, but also profound transformations in societal relations and the cultivation of a society that does not degrade its environment. It transcends a purely scientific problem, constituting an ethical imperative that mandates a paradigm shift in value orientations. The concept of sustainable development serves as a guiding principle for the establishment of a society that coexists harmoniously with nature.

Given the rapid growth of the global population, ensuring food security has become a key objective for every nation. In this context, the agrarian sector plays a pivotal role. Sustainable

development, which underpins food security, necessitates a balanced interaction of economic, environmental, and social factors. These factors, in turn, are influenced by both endogenous and exogenous forces. Effective governance of sustainable development within the agrarian sector requires consideration of the quality of the institutional environment. Consequently, contemporary management approaches must be grounded in a comprehensive analysis of economic, environmental, social, and institutional determinants. The rapid development of industry, urban growth, technological advances and globalization, while making modern life easier, at the same time create serious risks for the environment and future generations. This encourages society to find ways to minimize negative impacts, preserve natural resources and increase social responsibility, as well as to strive to stabilize the current environmental situation and prevent its deterioration.

Sustainable development of the agrarian sector of the economy is proposed to be understood as an optimally organized system of production, processing, sales, and consumption of agricultural products, from the perspective of the use and reproduction of socio-ecological-economic resources. This system is facilitated by economic agents and institutions authorized to develop and implement strategic and operational state policies in the field of agriculture. Its ultimate goal is to achieve national food security.

This approach allows for a comprehensive consideration of the following:

- 1) Sustainable development of the agrarian sector should not only be based on the consideration of socio-ecological-economic determinants as independent and isolated subsystems but must be built on the search for their optimal combination, which will maximize the positive synergistic effect while minimizing resource utilization;
- 2) Its achievement is impossible solely through the optimal use of available resources; therefore, their reproduction is equally important;
- 3) A crucial prerequisite for the effectiveness of the sustainable development management process of the agrarian sector is the coordinated work of all economic agents and public administration institutions, implemented with a clear sequence of steps, pre-specified in strategic and operational plans;
- 4) The ultimate goal of sustainable development of the agrarian sector is relevant (driven by the Sustainable Development Goals), clear, and comprehensive, aiming to achieve national food security.

Sustainable development involves using resources in a way that future generations can benefit from. This means that in order to leave our generation a clean planet with renewable resources, the current generation must use them more responsibly [2-7].

The conceptual foundations of sustainable development constitute a system of principles, values, and strategies that delineate the trajectory of societal, economic, and environmental development, aimed at meeting the needs of the present generation without compromising the ability of future generations to meet their own. 1 Key aspects of these conceptual foundations include the integration of three components: sustainable development entails a balanced synthesis of economic growth, social development, and environmental protection; these three components are interconnected and equally important, with no single component being achievable at the expense of others. Sustainable development necessitates the consideration of future generations' needs in contemporary decision-making, striving to bequeath an equivalent or enhanced environmental and social context. Each individual and organization bears responsibility for their impact on the environment and society, acknowledging the consequential nature of their actions and endeavoring to minimize adverse effects. Sustainable development mandates the engagement of all stakeholders in decision-making processes, which should reflect the perspectives and requirements of diverse societal groups. Instead of addressing emergent issues reactively, a preventive approach is imperative, entailing proactive planning and decision-making that accounts for potential risks. The conceptual foundations of sustainable development underpin the formulation of policies and strategies across all

levels, from local to global, with the objective of fostering harmonious coexistence between humanity and nature and establishing an equitable and prosperous society for all.

Sustainable development is a concept that envisions a balanced societal progression, fulfilling the needs of the present generation without compromising the capacity of future generations to meet their own. It is predicated on several key aspects, including the imperative for integrating economic, social, and environmental dimensions of development. This entails that decisions must encompass all three dimensions, rather than focusing on a singular aspect. Sustainable development must ensure equitable opportunities for all individuals, irrespective of origin, gender, age, or other factors. Every individual and organization bears responsibility for their impact on the environment and society. It is preferable to preempt ecological and social challenges rather than attempting to rectify them post hoc. Sustainable development necessitates the engagement of all stakeholders in decision-making processes. We must consider the needs of future generations in contemporary decision-making. These principles underpin the formulation of sustainable development policies and strategies across all levels, from local to global.

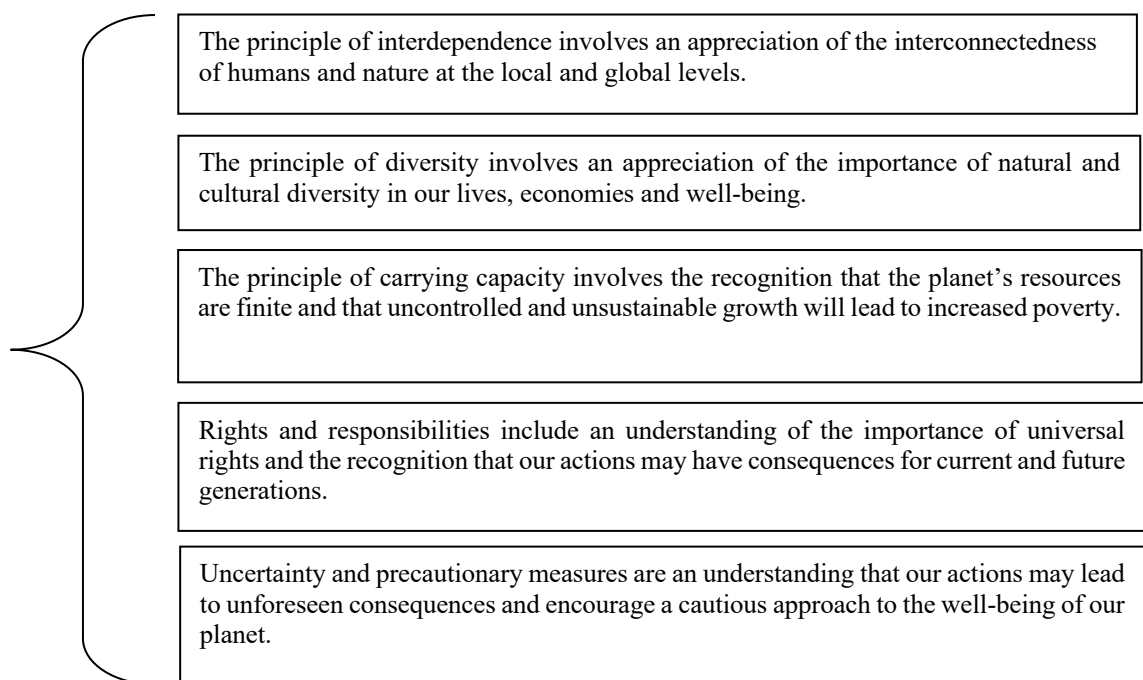


Fig. 1. *Basic principles of sustainable development*

1. The principle of interdependence, within the context of sustainable development, posits that humanity and nature are intrinsically interconnected, with actions undertaken in one locale potentially yielding consequences in another, even at a global scale. This principle underscores that humans are not entities separate from nature, but rather integral components thereof. Human health, well-being, and even survival are contingent upon the health and resilience of ecosystems. Interdependence manifests at both local and global levels. For instance, deforestation in one nation can exert influence on global climate patterns. Individual or communal actions may produce localized environmental impacts, yet the aggregate of such actions can precipitate global transformations. The principle of interdependence necessitates a systemic approach to addressing ecological and social challenges. This entails the consideration of all interrelationships and the repercussions of actions at various levels. This principle emphasizes the responsibility of each individual and organization for their environmental and societal impact. We must recognize the consequential nature of our actions and strive to minimize adverse effects. In simplified terms, the principle of interdependence signifies

that 'everything is connected to everything else.' Consequently, decision-making processes must encompass not only immediate outcomes but also long-term and global ramifications.

2. The principle of diversity within the context of sustainable development signifies the recognition and respect for the multiplicity of life forms on Earth, as well as the cultural heterogeneity of human societies. It underscores the importance of preserving this diversity to ensure the resilience of ecosystems, economies, and human well-being. This principle encompasses biological diversity (biodiversity), which guarantees the stability of ecosystems, their capacity for self-renewal, and adaptation to change. The loss of biodiversity poses a threat to ecological equilibrium, food security, and human health. Cultural diversity, as the variety of values, traditions, knowledge, and practices across different human cultures, enriches society, fosters innovation, and facilitates adaptation to change. The erosion of cultural diversity results in the loss of unique knowledge and experience, both of which are indispensable for sustainable development. The interrelationship between biological and cultural diversity demonstrates that numerous cultural traditions are rooted in knowledge of local ecosystems and their resources. Consequently, the preservation of biological diversity is often contingent upon the maintenance of cultural traditions. The significance of this principle for sustainable development lies in its role in ensuring the resilience and adaptability of systems to change, serving as a catalyst for innovation and novel solutions for sustainable development, and promoting social justice and equity. In essence, the principle of diversity advocates for the valuation and conservation of all life forms on Earth, alongside the cultural diversity of human societies, as a cornerstone for our well-being and a sustainable future[3].

3. The principle of carrying capacity, within the context of sustainable development, functions as a fundamental concept that emphasizes the finite resource potential of planet Earth. Its essence lies in the recognition that ecosystems possess a definite limit to their capacity for regeneration and life support, and that further uncontrolled growth in consumption and anthropogenic pressure will inevitably lead to ecological degradation and the exacerbation of socio-economic problems. Key aspects of the carrying capacity principle include resource limitation, as planet Earth has a finite quantity of natural resources such as water, air, soil, minerals, and biodiversity. Intensive utilization of these resources, exceeding their regenerative capacity, results in their depletion and ecosystem degradation. Each ecosystem has a specific threshold of resilience, beyond which it loses its ability to self-restore and sustain life. Exceeding this threshold leads to irreversible changes in ecosystems, such as biodiversity loss, environmental pollution, and climate change. Ecological degradation and resource depletion have severe socio-economic consequences, including increased poverty, inequality, conflicts, and migration. Unsustainable growth, which disregards the carrying capacity principle, exacerbates socio-economic challenges and jeopardizes future generations. The carrying capacity principle necessitates a transition to sustainable development, involving balanced resource utilization, ecosystem preservation, and the assurance of social equity. Sustainable development requires transformations in consumption and production patterns, alongside the implementation of environmentally benign technologies and practices. Consequently, the carrying capacity principle is paramount for comprehending the necessity of sustainable development and ensuring harmonious coexistence between humanity and nature.

4. The principle of rights and responsibilities, within the context of sustainable development, encompasses the awareness and adherence to universal human rights, alongside the recognition of accountability for the consequences of one's actions, both for present and future generations. This principle is grounded in the inextricable link between rights and duties, emphasizing that the realization of rights is contingent upon the fulfillment of corresponding obligations. Core facets of the rights and responsibilities principle include universal human rights, wherein it is acknowledged that every individual possesses inalienable rights, irrespective of origin, gender, age, or other factors. These human rights span the right to life, freedom, equality, justice, health, education, a clean environment, and others. Responsibility for the repercussions of actions is articulated by this principle, underscoring that each individual and organization bears accountability for their

environmental and societal impact. Actions undertaken may have long-term ramifications, affecting the well-being of future generations. Intergenerational equity mandates the consideration of future generations' needs in contemporary decision-making. We must endeavor to bequeath to future generations an equivalent or enhanced environmental and social context. Furthermore, this principle stipulates adherence to laws and norms that aim to safeguard human rights and the environment. The fulfillment of societal obligations is a prerequisite for ensuring sustainable development. This principle necessitates that businesses and other organizations account for the social and ecological implications of their operations. Social responsibility entails the voluntary assumption of commitments to enhance societal welfare and protect the environment. Consequently, the principle of rights and responsibilities is pivotal for securing sustainable development, as it accentuates the necessity for equilibrium between rights and duties, as well as accountability for the outcomes of our actions.

5. The principle of uncertainty and precaution, within the context of sustainable development, constitutes a pivotal element that reflects the imperative for a prudent and responsible approach to planetary resources. This principle stems from the acknowledgment that the scientific understanding of ecosystems and the ramifications of anthropogenic activities is incomplete, thereby introducing substantial uncertainty regarding potential risks and consequences. This principle underscores that scientific knowledge is not invariably sufficient to accurately forecast the repercussions of human activities on the environment. Numerous intricate interdependencies exist within ecosystems, which remain incompletely comprehended, thus rendering our actions susceptible to unforeseen outcomes. In instances of uncertainty, the implementation of precautionary measures is essential, entailing cautious conduct and the minimization of environmental risks. This implies that even in the absence of conclusive scientific evidence, measures must be undertaken to avert potential harm. This principle assigns responsibility to decision-makers concerning the prospective ramifications of their decisions. It is imperative to consider the long-term consequences of actions for future generations. Rather than adopting a reactive stance towards emergent issues, a preventive approach is necessitated, involving the proactive avoidance of their occurrence. This necessitates planning and decision-making that incorporates potential risks. Consequently, the principle of uncertainty and precaution serves as a cornerstone for responsible decision-making in the realm of sustainable development, facilitating the minimization of environmental risks and the assurance of future generations' well-being.

Following an analysis of the essence of sustainable development, it is feasible to formulate objectives that would facilitate the establishment of an effective management system. This system should be predicated on the harmonious integration of economic, social, and environmental measures, aimed at constructing societal relations founded on the principles of solidarity, trust, equity, and ecological security. The pivotal task of these objectives is the attainment of social justice and the responsible utilization of natural resources. This necessitates the integration of efforts for economic growth, achievable through a profound transformation of Ukraine's public administration system, leveraging opportunities for international cooperation. To delineate priority steps in the implementation of the sustainable development concept in Ukraine, it is imperative to identify key directions for this endeavor. Consequently, a detailed analysis of the Sustainable Development Goals for 2024-2030, along with their corresponding tasks, is warranted to ascertain their applicability to Ukraine's agrarian sector[1, 5].

The 17 Sustainable Development Goals (SDGs) are a global call to action to end poverty, protect the planet, and ensure peace and prosperity for all people in the world. They were adopted by all United Nations Member States in 2015 as part of the 2030 Agenda for Sustainable Development. These 17 goals are interlinked, meaning that success in one impacts on the success of the others. They are comprehensive and indivisible and ensure a balance between the three dimensions of sustainable development: economic, social and environmental[1].

The subsequent step entails the definition of sustainable development determinants as a confluence of factors that delineate the possibility and efficacy of achieving sustainable development

goals. These encompass a broad spectrum of aspects, ranging from economic and social to environmental and institutional. Economic determinants include economic growth that is congruent with ecological and social constraints. Innovation and technological advancement, directed towards enhancing resource utilization efficiency and mitigating adverse environmental impacts. Sustainable consumption and production patterns, incorporating rational resource use and waste minimization. The development of a 'green' economy, generating employment and fostering environmentally sound growth. Social determinants encompass poverty and inequality reduction, ensuring equitable access to education, healthcare, and other social services, gender equality and the empowerment of women, social integration and the advancement of civil society, and the preservation of cultural diversity and traditions. Environmental determinants comprise biodiversity and ecosystem conservation, rational utilization of natural resources such as water, air, and soil, climate change mitigation and adaptation, and environmental pollution prevention and waste management. Institutional determinants include effective public governance that ensures the implementation of sustainable development policies, international cooperation and partnerships, the enforcement of the rule of law and human rights adherence, and the advancement of scientific research and education in sustainable development. It is crucial to note that these determinants are interconnected and interdependent. The successful attainment of sustainable development goals necessitates a comprehensive approach and coordinated actions across all levels.

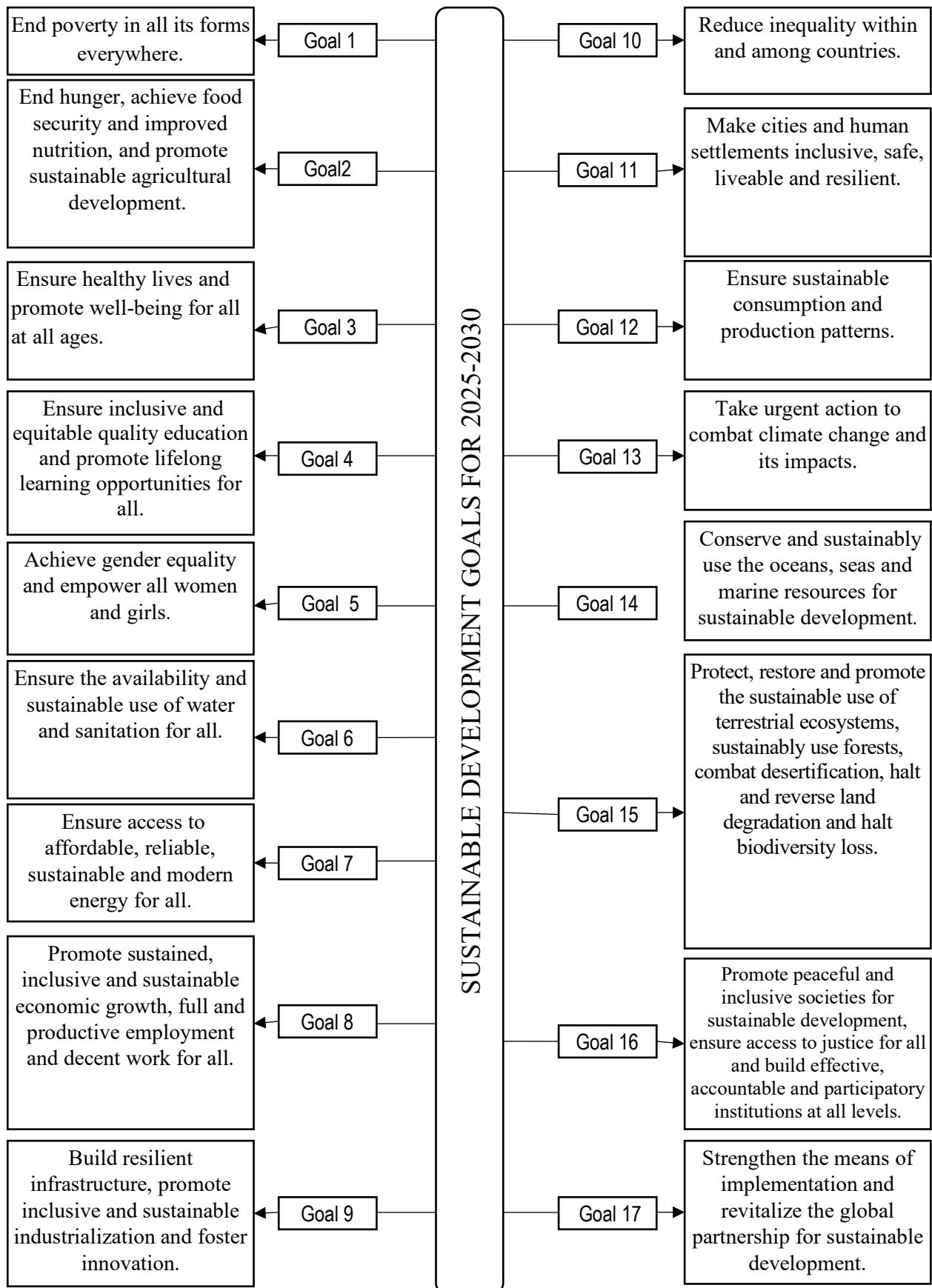


Fig. 2. Sustainable Development Goals For 2025-2030

Source: [1, 5, 7]

The Sustainable Development Goals (SDGs) are aimed at creating a balanced approach to development, encompassing social, economic, and environmental dimensions, thereby ensuring harmony among them. Continued development is contingent upon a planet that sustains life. The goals address aspects of social development (e.g., poverty eradication, gender equality, access to education), ecological concerns (climate change, protection of terrestrial and marine ecosystems), and economic advancement (infrastructure development, growth stimulation). However, these goals, despite their comprehensive nature, occasionally lack specificity. The SDGs, in their entirety, comprise 17 goals and 169 targets. Of these, only Goal 3 directly pertains to health: 'Ensure healthy lives and promote well-being for all at all ages.' It encompasses 13 targets, including maternal and child health, the control of infectious and non-communicable diseases, tobacco prevention, mental health provision, enhancement of road safety, and reduction of pollution. Additionally, critical aspects such as universal access to medical services, the development of health system financing, and human resource capacity are addressed. The SDGs necessitate transparency and participatory processes in their implementation, although their realization is voluntary. The High-level Political Forum on Sustainable Development is scheduled to convene annually at the ministerial level and quadrennially at the 'Heads of State' level to review progress, but without mandatory independent monitoring.

The implementation of the ambitious SDGs appears promising but requires substantial resources and political will from states. The annual expenditure to achieve these goals may reach 5 trillion US dollars, while the funding deficit remains significant. The UN anticipates an active role for the private sector in financing, yet market mechanisms are not consistently effective in supporting global public goods. "The attainment of sustainable development necessitates a harmonious integration of cultural and natural heritage preservation with innovative and creative approaches. Creative activities in the realm of environmental management require the consideration of the complexity of natural ecosystems and the adaptation of societal activities to their capacity to sustain life on Earth. The principle of eco-efficiency is paramount, entailing the augmentation of goods and services production while concurrently diminishing resource utilization and environmental pollution. Equally significant is the principle of sufficiency, which delineates the boundaries of consumption. Nations of the Global South emphasize the transition to sustainable development within the context of combating poverty, inequality, and injustice. The core tenet of sustainable development posits that environmental issues are inherently social. Consequently, their resolution mandates social transformations, specifically: the alteration of societal relations; the reformation of socio-political systems. It is imperative to identify a social organizational model that ensures the harmonious coexistence of society with nature. The challenges of sustainable development are fundamentally issues of governance and political volition. Their realization necessitates appropriate international and national policies. Achieving sustainable development requires profound structural modifications in governance and novel approaches to operational procedures across diverse domains of economic, social, and political life. At the national and local levels, it is essential to establish intersectoral institutions and mechanisms predicated on the principle of public participation and that integrate the endeavors of governments, civil society, and the private sector to formulate a shared vision of future development, its planning, and collaborative decision-making.

The implementation of sustainable development principles necessitates a strategic approach predicated on a paradigm shift in both cognitive frameworks and political practices. This entails a transition from: rigid planning, which rapidly becomes obsolete, to an adaptive system capable of continuous improvement; the concept of state-centric development responsibility to a distributed responsibility model encompassing all societal stakeholders; centralized decision-making to open dialogue, collaborative engagement, and concerted actions; formalistic legislative frameworks to substantive management outcomes and active public participation; sectoral planning to integrated planning methodologies; large-scale, externally dependent 'projects' to development models anchored in domestic capabilities. This approach mandates fundamental transformations in governance and intersectoral coordination, alongside the engagement of governmental bodies, civil society, and the

private sector in collaborative planning and decision-making processes. Crucial strategic documents, such as the National Sustainable Development Strategy and the National Environmental Action Plan, remain undeveloped in Ukraine. In light of the nation's aspirations for European integration, it is pertinent to note that the principle of sustainable development is enshrined in the EU's Amsterdam Treaty (Treaty on European Union, 1997). Sustainable development is delineated as a foundational principle across all EU policies. Consequently, all EU policies must integrate economic, social, and environmental dimensions, ensuring that progress in one policy domain does not impede advancement in others.

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