

## CONCEPT OF TRANSITION TO "GREEN ECONOMY" IN UZBEKISTAN: CONTENT AND ESSENCE.

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### **Abstract.**

*The concept, purpose, tasks, main content and essence of the concept of "Green economy" are revealed in the article. The stages of the implementation of the concept, the directions of the specified activities, the role and importance of these activities for the life of the population and the economy of our republic are shown. In the implementation of the concept, scientific recommendations were made about international experiences, especially the experiences of Belarus.*

*In the article, special attention is paid to socio-economic development and ecological significance of the transition to the "green economy" in Uzbekistan, especially to the rational use of natural resources, especially water resources, its protection and environmental safety, in this regard, scientific achievements scientifically based opinions on its use are expressed.*

*The article is recommended for professors, teachers, bachelors and masters studying green economy issues, employees of state administration bodies, and those interested in these issues.*

### **Key words.**

*Green economy, concept, legal regulation, global goals, improvement of legal framework, biodiversity, development strategy.*

Introduction: Today, we should not ignore the warning call that Mother Nature sends to us. Unfortunately, climate change is intensifying. In Central Asia, where we live, the average annual temperature has risen by about one degree in the last 30 years. The decline of the basin of the main rivers and biodiversity in our region is a serious concern. Evaporative gases and large-scale air pollution are exacerbating the problem. Today, no one doubts that the efforts of countries should be more active and effective in order to achieve the goals of "green development". We have no other option," President of the Republic of Uzbekistan

Shavkat Mirziyoyev said in his speech at the second international summit "Green growth and cooperation for global goals - 2030" (P4G) held in the Republic of Korea.

In order to achieve "green development", we need to move to "green economy" and develop it. Therefore, in order to create such an economy in our country, it is necessary to develop a green economy. Green economy appeared as a branch of economics at the end of the 21st century. This economy is a component of the natural environment and is one of its directions. The concept of green economy is related to green politics, such as ecological economics, environmental economics, resource-based economics, human development, feminist economics, which includes ideas from many other areas of economic science and philosophy. includes a lean economy.

Green economy is an economic system, the main goal of which is to develop all spheres of the economy while preserving the ecology of our planet.

Thus, the green economy is based on the further development of the economy related to the production and service sectors while preserving the resources necessary for human life and health, the environment and ecology as a whole. is a new direction of economic activity.

Level of awareness of the problem: The global community is calling for sustainable, green development of humanity, which requires a transition to a circular economy, biodiversity conservation, urban infrastructure planning, agricultural development, and more efficient and long-term use of ecosystem services in business. is teaching Financial resources are being mobilized for the sustainable use of natural resources by preventing greenhouse gas emissions and adapting to a changing climate.

Work on the transition to the "Green Economy" in Uzbekistan began in 2020, and in 2019, the "Concept of the transition to the green economy of the Republic of Uzbekistan in 2019-2030" was developed and approved.

The main reason for this is the fact that in 2018 the Republic of Uzbekistan ratified the Paris Agreement (Paris, December 12, 2015) and in connection with its implementation, according to the contribution determined at the national level - until 2030, the comparative allocation of greenhouse gases per unit of gross domestic product will be 10 times higher than the level of 2010. was the acceptance of the obligation to reduce the percentage. Because, within the framework of fulfilling the obligations of the Paris Agreement, the medium-term priority tasks for reducing greenhouse gas emissions are to reduce the energy and resource consumption of the country's economy, to widely introduce energy-saving

technologies in production, to expand the use of renewable energy sources, to reduce environmental stress in the archipelago. it was necessary to adopt a number of strategic and branch plans, programs, as well as normative legal documents, which envisage elimination of the consequences.

In order to solve the current problems, the processes of economic development include low-carbon development and resource saving in all sectors of the economy, the introduction of efficient and environmentally friendly technologies, as well as the integration of the principles of "green" economy oriented towards sustainable agriculture from natural and energy resources. a fundamental change in the methods of use was required.

The establishment of the research conducted in Uzbekistan today on the basis of modern technologies is a part of the development [17-19].

Scientific research in the field of agriculture and water management will be facilitated by these issues. It has been shown that the scope of work that can be carried out within the framework of the Green Space program includes the prospects of development technologies. An example of this is the experience of professors and teachers conducting scientific work in the field of water management [20-23].

In this case, the long-term transition to a "green" economy should be based on the following basic principles:

- compliance with National goals and objectives in the field of sustainable development;
- rational use of resources, sustainable consumption and production;
- the priority of using "green" means and approaches to achieve the goals of socio-economic development;
- achieving existing macroeconomic goals by increasing competitiveness and improving performance in the most important sectors, creating "green" jobs, improving the well-being of the population;
- to ensure the investment attractiveness of measures of effective use of resources.

In this regard, the development and adoption of the concept of the transition to a "green" economy of the Republic of Uzbekistan in the period of 2019-2030, aimed at integrating climate change issues into the sustainable development of the national economy gained special importance.

Determining the content and essence of the concept, the following priority directions were defined:

1. Improving the energy efficiency of the basic sectors of the economy;

2. Diversification of the consumption of energy resources and development of the use of renewable energy sources;

3. Adapting to and mitigating the consequences of climate change, improving the efficiency of natural resource use and protecting natural ecosystems;

4. Development of financial and non-financial mechanisms to support the "green" economy.

The first of these priority areas is the improvement of energy efficiency of the basic sectors of the economy, and its content consists of measures implemented in four areas. Khususan, elektr energetika sohasida:

- of power plants operating through the introduction of high-efficiency technologies based on steam-gas and gas turbine devices

- reconstruction and modernization of energy production facilities; improvement and modernization of the configuration of main power networks to increase the stability of the energy system;

- implementation of organizational and technical measures, including optimization of power grid modes, compensation of reactive power and network schemes;

- increase the level of automation of technological processes, reduce the amount of electricity used for transportation and distribution;

- complete equipment of electric power consumption systems with automatic control and accounting devices.

In the field of thermal energy:

introduction of new technologies of thermal energy development, including cogeneration technologies in central boiler houses, technologies of coal steam-turbine power units with supercritical steam performance;

modernization and reconstruction of obsolete equipment of boiler houses;

- waste gas heat disposal of turbocompressor devices;
- optimization and modernization of the location of heat networks;
- use of modern heat-insulating materials in the reconstruction and modernization of heat networks;

- automation, dispatching and optimization of the thermal energy production and transportation system taking into account the number of consumers;

- providing consumers with modern meters;

- use of solar collectors for heating water in boiler rooms.

In the field of oil and gas industry:

Natural gas extraction, processing, transportation and distribution due to the modernization of compressor stations, low and medium pressure gas distribution networks, as well as gas transport system with the introduction of effective technologies of control of the loss of hydrocarbon resources (SCADA). reduce losses;

Accounting for gas supply and introduction of modern technologies of its distribution;

Reduction of greenhouse gas emissions in the processing and storage of oil and oil products;

Reduction of greenhouse gas emissions resulting from their burning as a result of introduction of disposal and deep processing processes of gasses mixed with oil;

Introduction of alternative energy sources in oil and gas production facilities; Utilization of the heat of exhaust gases for the production of electricity.

In the field of chemical industry:

Modernization of production facilities for ammonia, nitric acid and mineral fertilizers and creation of new facilities with high energy efficiency;

Use of heat utilization technologies of chemical processes with large energy consumption for electricity production;

It consists in the introduction of industrial use of large tonnage of man-made waste.

The second priority direction - it is the diversification of the consumption of energy resources and the development of the use of renewable energy sources, which requires the implementation of the following terms:

In the field of renewable energy sources - approval of long-term target indicators for the development of renewable energy sources, as well as technical aspects of safe integration of new power generation facilities using renewable energy sources into the unified electricity system of Uzbekistan every year. determining their location;

analysis of current standards in the field of renewable energy sources and harmonization of national standards with international norms in this field;

introduction of modern scientific and technical solutions in the design and construction of large, medium, small and micro HPPs, wind generators and solar plants to increase the share of renewable energy sources in the structure of the energy balance;

localization of production of equipment for obtaining energy from renewable energy sources;

modernization of energy production capacities of existing hydroelectric power stations; construction of small derivation HPPs and their infrastructures;

development of state programs for the introduction of solar batteries for the production of electricity and thermal energy in rural areas and remote areas of the republic;

creation and support of demonstration centers on the use of renewable energy sources;

public awareness of renewable energy sources and energy efficiency issues.

In the field of construction and use of buildings:

implementation of state programs to improve the energy efficiency of buildings, including reconstruction of multi-storey housing and private housing stock;

revision of construction norms and rules at least once every 5 years in order to strengthen energy efficiency requirements in the implementation of construction and reconstruction;

creation of a system of control/monitoring of compliance with construction standards in the construction and use of buildings;

improvement of approaches to architecture-planning solutions, taking into account the improvement of energy efficiency in the construction and reconstruction of buildings;

creation of energy certification system of buildings;

revision of current norms and standards for heat-retaining building materials and adoption of new ones;

creation of target funds for energy-efficient renovation of multi-storey buildings in private housing owners' associations;

development of differentiated tariff system to encourage energy saving;

improvement of technologies of construction, reconstruction and capital repair of buildings using modern heat-preserving materials, double-glazed windows;

carrying out wide information campaigns among the population, including through the mass media, on the issues of improving the energy efficiency of buildings.

In the field of transport:

formation of a unified comprehensive development policy aimed at reducing transport costs and ensuring efficient operation of the transport sector,

development of "green" transport in accordance with long-term city development plans and environmental safety measures;

Expanding the production and use of vehicles with improved energy efficiency and environmental characteristics, meeting Euro-4 and higher standards, electric cars, cars with hybrid engines and cars running on gas fuel;

production of motor fuels with improved characteristics;

continue to update the motor vehicle fleet, develop programs that encourage the disposal of old cars and the purchase of new, more environmentally friendly cars;

creation and improvement of effective public transport systems (increasing the share of public transport with an improved description);

creation and development of new transport and logistics systems, development of road infrastructure;

to strengthen state control over the environmental condition of vehicles in use.- Qurilish materiallari ishlab chiqarish sohasida:

increase the volume of use of secondary resources and large tonnage man-made waste of industrial sectors (energy, metallurgy, chemical industry) in the production of building materials;

the following building materials: cement, brick, lime, production of aerated concrete products using the autoclave method, introduction of innovative energy-efficient technologies for the production of heat-preserving materials, roofing materials, wood-slag plates;

introduction of advanced cement production technologies using heat utilization technologies and technological processes that generate electricity;

The third priority direction- it is adapting to and mitigating the consequences of climate change, increasing the efficiency of natural resource use, and protecting natural ecosystems, and includes activities in the following areas.

- In the field of water management:

increase the efficiency of water resources use, prevent the continuation of land salinization and quality deterioration;

construction of hydrotechnical facilities, pumping stations and reservoirs and reconstruction of existing ones;

wide use of information and communication technologies and innovations in water management;

renewal, modernization and automation of water management facilities;

wide application of energy-efficient and water-saving technologies of irrigation of agricultural crops, improvement of mechanisms for encouraging water conservation;

development of mechanisms for sustainable management of water resources.

In the field of agriculture:

restoration of degraded pastures and introduction of sustainable pasture management mechanisms;

introduction of organic farming methods;

replanting of crops in order to ensure permanent coverage of the surface of arable land;

crop diversification (expanding the planting of perennial trees and perennial grasses);

attraction of investments in production and processing, creation of added value chain of agricultural and food products;

proper storage/processing of livestock organic waste;

prevention of contamination of water sources with agricultural waste; highly resistant to salinity, drought and other dangerous events and risks

cultivation of productive livestock and plant species (varieties), preservation of the gene pool of local livestock species and plant varieties, and the gene pool of wild ancestors of cultivated plants.

In the field of forestry:

- restoration of forests and preservation of natural vegetation in all natural zones of the country;

- expansion of forest areas in mountainous, sub-mountainous and desert zones of the country, as well as ensuring their preservation, protection and sustainable development;

- expansion of plantations of fast-growing native tree species;

- creation of tree groves that protect the soil, establishment of forests on degraded lands (agroforestry reclamation);

- use of local plant species and varieties resistant to salinity, drought and other dangerous events and risks in the process of reforestation and greening;

- improvement of forestry using modern high production technologies;

- wide use of geoinformation technologies and innovations in forestry; forests among the population, including through mass media

- organization of extensive information campaigns on conservation and restoration issues.

In the field of implementation of works related to solid household waste:



development of sanitation infrastructure aimed at ensuring the full coverage of the population with services for the collection and removal of MSW;

Creation of an efficient and modern system of processing of NPCs;

reduce the volume of MSW sent to landfills, create modern MSW landfills that meet the requirements of sanitary and environmental standards, and take measures to close and recultivate existing landfills;

improvement of price formation and optimization of tariffs in the field of sanitary cleaning;

use of solid waste management facilities as alternative energy sources.

The fourth, priority direction - This is in the field of development of financial and non-financial mechanisms of "Green" economy support:

Development of institutional foundations for the introduction of "green" technologies:

assessment of technological needs, setting priorities and selecting the most important technologies, supporting their development/transfer;

development of mechanisms for commercialization of "green" technologies, creation of organizational structures - technology delivery agencies, technology business incubators, technology parks, clusters - to support innovative activities.

Improvement of the legal framework in the field of "green" economy: inventorying the normative legal framework covering the priority directions of the concession, preparing proposals for its improvement;

development of economic measures and tools, in particular, introduction of payment for reduction of greenhouse gas emissions;

development and implementation of mandatory requirements for energy efficiency.

Development of energy efficiency regulation and control mechanisms:

development of target indicators for energy saving and energy efficiency and introduction of a system of monitoring, verification and reporting of their implementation;

conducting energy management and audit of enterprises with high energy consumption;

development of an automated state system of accounting for electricity consumption for all categories of consumers, including industrial and energy facilities.

Integrating the principles of "green" economy into education and science:

improvement of educational programs of the relevant areas of higher and secondary special education, taking into account the basics of "green" economy,

introduction of renewable energy sources, development of "clean" transport, energy saving and other issues, as well as inclusion of topics on the basics of "green" economy in relevant programs of general secondary education;

in the process of preparing or republishing relevant educational literature for higher, secondary special, vocational, general secondary education (by directions), including topics on the basics of "green" economy;

"Green" economy fundamentals, in particular, "Green technologies", "Fundamentals of environmental regulation taking into account green criteria", "Renewable energy technologies", "Energy saving and energy efficiency" introduction of "problems" topics;

support of scientific research and innovative developments in the field of "green" technologies.

Capacity building and creation of a favorable environment for the transition to a "green" economy: continuous implementation of quantitative obligations of our country under the Paris Agreement

to create a monitoring, accounting and verification (MRV) system for tracking greenhouse gas emissions, taking into account national conditions, and to provide reporting on greenhouse gas emissions;

development of climate monitoring system;

development of public-private partnership capacity to promote "green" technologies;

support to private investors, including small businesses, in the introduction of "green" innovations;

creation of various counters of energy-resource efficiency of goods (work, service), catalogs of specifications, as well as development of mechanisms for stimulating state "green" purchases by introducing a system of certification of energy-resource efficiency of goods (work, service);

training of personnel, formation of a culture of careful treatment of energy and resources;

raising the awareness and qualification of industry employees, including managers and engineers, taking into account the new requirements for professional skills with the development of the "green" economy;

taking into account the basics of "green" economy in the development of state education programs for personnel training and retraining;

increase the personnel and technical capacity of scientific research institutions for more effective introduction of eco-innovative technologies;

development of research in the areas related to mitigation of the consequences of climate change and adaptation to it;

strengthening the cooperation of national and foreign scientific organizations in the field of promotion of "green" technologies.

Support for "green" investments:

introduction of "green" lending, venture financing system;

creation of "green" funds, energy saving special funds and other similar mechanisms;

activation of the private sector in the financing of projects on the transition to a "green" economy, as well as stimulation of the banking system in relation to "green" investments;

support of the sustainable growth of the "green" economy by the state through fiscal (treasury) policy.

The following mechanisms for the implementation of the concept of transition to a green economy in Uzbekistan have been defined:

- the main tasks and priorities of the strategy of transition to a green economy, developed on the basis of the concept, are carried out by means of measures defined in national, sector, sector plans and development strategies.

- all interested parties, including state and economic management bodies, local executive authorities, citizens' self-government bodies and other institutions of civil society, international organizations, the private sector, as well as the population, will be involved in the implementation of this strategy.

- Green Climate Fund, Adaptation Fund and other climate-related resources, as well as foreign investments, international financial institutions, foreign government financial organizations and loans and grants from other foreign donors can be attracted.

The expected results of the implementation of the strategic program developed on the basis of the concept of transition to a green economy in Uzbekistan determine the essence of the concept:

- As a result of the implementation of the strategy, it is expected to achieve the following by 2030: comparative allocations of greenhouse gases per unit of GDP

A 10 percent reduction from 2010 levels;

doubling the energy efficiency index and reducing the carbon consumption of the gross domestic product;

further development of renewable energy sources and increase their share to more than 25% of the total volume of electricity production;

Providing up to 100% of the population and economic sectors with access to modern, cheap and reliable energy;

modernizing the infrastructure of industrial enterprises, increasing their energy efficiency by at least 20 percent, and ensuring their stability due to the wider use of clean and environmentally safe technologies and industrial processes;

expanding the production and use of motor fuel and motor vehicles with improved energy efficiency and ecological characteristics, as well as the development of electric transport;

to significantly increase the efficiency of water use in all sectors of the economy, to introduce drip irrigation technology on an area of up to 1 million hectares, and to increase the yield of crops grown on them by 20-40%;

achieving a neutral balance on land degradation;

to increase the average yield of the main types of agricultural food production to 20-25%.

- The implementation of the strategy serves to improve management in the field of increasing the energy efficiency of the economy, preserve and rationally use natural resources, reduce greenhouse gas emissions, ensure the use of "green" energy, create "green" jobs and achieve climate stability.

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