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Article

Green Economy: A Necessary Decision to be Taken

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Abstract: The concept of the green economy is one of the global strategies to face contemporary societies' economic and environmental crises. Methodologically, the conceptualization, objectives, implementation, and criticism of various sectors of society to this new economic paradigm are addressed. It was found that authors and civil organizations have great expectations in the face of the challenges and challenges of this global strategy that has within its objectives sustainability, the eradication of poverty, and the inclusion of vulnerable social sectors. It is concluded that the green economy can contribute to maintaining a healthy environment and the proper use of ecosystem services, both for the present generation and for future generations.

Keywords: sustainable development, green economy, social inclusion, natural resources, sustainable economy, ecological economy.

1. Introduction

The last decade has brought a series of inconveniences for humanity, problems such as climate change, environmental scarcity, the crisis in sectors of vital importance for development such as fuels, food, and water, and finally to the financial system and the whole of the world economy [1-3]. The economic and environmental crises come from the same origin and are mutually reinforcing due to the current economic model seeks short-term benefits without considering ecosystems as scarce goods, nor the consequences generated on the environment and society [4, 5].

In response to the problems currently being faced, a new trend in the economy arises, the green economy, which has undoubtedly been favored by the difficulties faced by the prevailing economic paradigm due to the crisis and market failures that were generated during this first decade of the 21st century [6, 7], in particular the financial and economic crisis of 2008. However, at the same time, there is evidence of a better way forward [7, 8], a new economic paradigm in which obtaining material wealth must not be obtained at the cost of increased environmental risks, ecological scarcity, or social inequality [9].

This new economic thinking seeks strategies to solve the various crises that hampered the development of world society in recent years [10, 11]. The consequences of climate change, the food crisis, the recent economic and financial crisis, and the low rates in the fight against poverty were important factors in defining the Green economy concept to which the United Nations contributed through the program for the environment - UNEP. At the Rio +20 summit, the concept of green economy sought to generate a change to the general political primacy of sustainable development, formulated in 1992 in Rio de Janeiro, in a concrete multidimensional strategy whose central element is structural economic change [12].

The concept of the green economy does not replace that of sustainable development, but today it is recognized that to achieve sustainability, it is necessary to change the brown

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economy model, where wealth was achieved without taking into account takes into account problems such as social inequality or the depletion of resources [13, 14]. Sustainability remains a vital long-term goal, and achieving it requires greening the economy [15].

2. Green Economics

The concept of Green Economy is not new, it was introduced in 1984 by Pearce, Markandya, and Barbier in their book “Blueprint for a Green Economy”. And there they defined the Green economy as "a system of economic activities related to the production, distribution, and consumption of goods and services that result in improvements in human wellbeing in the long term, without committing future generations to significant environmental risks and ecological scarcity" [16, 17]. However, no official and global introduction was not made until Rio + 20 in which this concept was officially introduced [18].

The economy and the environment currently achieve a high degree of interaction due to the environmental awareness of society, taking into account the damage that productive activities cause to the natural environment [19, 20]. These activities cause pollution processes in water, air, soil, and biodiversity resources, affecting social dynamics [21, 22]. This awareness has allowed more sustainable and environmentally responsible alternatives to be sought [23], in the sense of achieving a series of actions and regulations by the state and social initiatives to control, minimize, correct, and prevent the harmful effects of economic activities on the natural system. This activities process is known in the media as the green economy [24, 25].

The concept of the green economy is related to that of "ecological economy," a term that arises from the Spanish translation of "green economy" [26]. In this way, the green economy was presented by the United Nations Environment Program - UNEP, at the end of 2008, as a comprehensive and practical working mechanism, which seeks through the analysis and support of investment policies to encourage green sectors and change the hostile economic sectors with the environment [27, 28]. Currently, the green economy is described as an economy that seeks to improve human wellbeing and achieve social equity [29-31] by significantly reducing environmental risks and using sustainable ecological services. The economy seeks development with low carbon emissions, efficient resources, and being socially inclusive [31, 32].

This concept does not have a clear definition [33, 34]. In Spain, there are definitions such as the Fundació Fòrum Ambiental de Catalunya, where the green economy is assumed as the set of companies and economic activities dedicated to prevention –before-, mitigation –during- and/or correction –after- of the problems generated to natural systems by anthropic activities. However, it is necessary to consider that the concept of a green economy derives from a series of speeches by organizations worldwide, among which those shown in Table 1 stand out.

Table 1. Speeches by leading organizations on the concept of green economy

Organization	Discourse
Green Initiative of the United Nations Environment Program (UNEP).	Arising in 2008 as a response to the financial, food, and energy crisis, it led to the Global Green New Deal (GGND), which recommends investments in public policies to promote the green transition.
Green Growth Strategy (GGS) of the Organization for Economic Cooperation and Development (OECD).	Also, in response to the 2008 crisis, as a framework for its political position for the Rio + 20 Conference. With strategies such as progress indicators and a toolbox for the elaboration of policies for the member countries.
"Europe 2020 Strategy" (Europe 2020 Strategy) of the European Union	Another response to the same crisis, where a strategy of "smart, sustainable and inclusive growth" is adopted for a maximum period of ten years The surge in 2009, publishing reports on energy; environment and climate change; natural resources; and cultural perspectives, introduced "green development" through green innovations.
Asia's Green Transition and Innovation approach.	Which included among its objectives "an inclusive, green and sustainable recovery."
G-20	The concept and initiative of green jobs arise
International Trade Union Confederation	Whose development topics are environmental technology and eco-industries.

Finally, according to Carfi & Schilirò, a green economy relies on three main strategies: reducing carbon emissions, greater energy efficiency and the use of natural resources, and preventing the loss of biodiversity and its ecosystem services. To implement these strategies, support through investments at the public and private levels is necessary and political reforms and regulatory changes [32]. Therefore, it is essential to preserve, strengthen and, when required, rebuild natural capital as an economic asset and of public benefit, on which some sectors of society depend for their development [33].

3. Goals of the green economy

Before addressing the objectives of the green economy, it is important to review the context of world order, where global environmental problems, such as climate change, can generate irreparable consequences for humanity [34, 35]. In that order of ideas, at an economic level, there is currently an increase in the price of renewable fuels, food prices, and raw materials [36, 37]. The increase in energy demand (predicted by the International Energy Agency-IEA) shows that dependence on the use of oil and other fossil fuels will continue for a long time [38, 39]. At a general level, food security has not dimensioned the problem; for this reason, alternative solutions are not being generated to feed a population of nine billion people in 2050 [40,41]. Freshwater scarcity is a global problem, and forecasts indicate that by 2030 there will be a greater imbalance between the annual demand and the renewable supply of freshwater [41-44]. Concerning social dynamics, according to UNICEF & WHO, for basic sanitation services, it is evidenced that approximately 663 million people in the world are without access to drinking water. All these problems represented in the current crises affect the ability to sustain prosperity throughout the world and achieve the Millennium Development Goals - MDGs - to eradicate extreme poverty.

Figure 1. Strategies to achieve the objectives of the green economy.

One of the main actions that the green economy seeks in sustainable development is eradicating poverty so that a better quality of life is guaranteed without affecting natural resources [45, 46]. For this reason, spreading the concept of the green economy without considering the needs of vulnerable groups and natural deterioration is a mistake, considering that recovery of environmental and social dynamics is not guaranteed in the short, medium, and long term [47, 48]. According to Biswas & Roy, the strategies proposed to achieve these objectives are shown in Figure 1.

The UNEP Green Economic Report –GER- contrasts with the "Brown Economic," whose growth engine is physical-technological and financial capital, or built capital, whose wealth is produced at the cost of excessive dependence on fossil fuels, depletion of natural resources, and environmental losses. On the other hand, the green economy is sized towards natural capital, which can reach growth and jobs similar to those of the brown economy and surpass it in the medium and long term, ensuring greater environmental and social benefits in its implementation [49, 50].

To achieve the transition towards the green economy, eight main sectors of the economy were considered with the capacity to: reduce poverty, invest in natural capital and its recovery, generate jobs and improve social equity, encourage renewable energy and energy efficiency. Growth and jobs similar to those of the brown economy and overcome it in the medium and long term, ensuring greater environmental benefits. Based on the UNEP document, "towards a green economy," it is observed that its energy objectives, mobility, and sustainability urban [51], a summary of these sectors can be seen in Table 2.

Table 2. Key sectors of the economy to achieve the transition to the green economy.

Sector	Description
Foresting	Reduce deforestation, increasing reforestation; certify products from forests, and payment for environmental services.
Agricultural	Change the management practices of fertilizers, water; seeds; mechanization of arable areas; the comprehensive management of pesticides and nutrients.
Water resources	Conserve groundwater and surface water sources, with the efficient use of the resource, to generate quality of life conditions acceptable to the population.
Fishing	Generate the sustainable increase of innovative production activities and financing to reduce overfishing worldwide.
Ecotourism	Lead to the development of the local economy, with increased participation of the local community, of vulnerable groups, in the tourism value chain.
Renewable energy	Increase the energy matrix from renewable sources, invest in biofuels, and photovoltaic and wind applications.
Transportation	Modify private to public transport, considering that mobility depends on the use of the territory, and it is necessary to improve adequate planning.
Manufacturing industry	Strengthen production by extending the useful life of products f with redesign and recycling processes, increasing the efficiency of using natural and energy resources.

They lead to low carbon emissions, use of natural resources efficiently, and be socially inclusive. The economic sectors of production that directly impact the environment should be encouraged through viable and reasonable alternatives by the public sector in general [52, 53], as expressed in Figure 2.

4. Implementation of the green economy

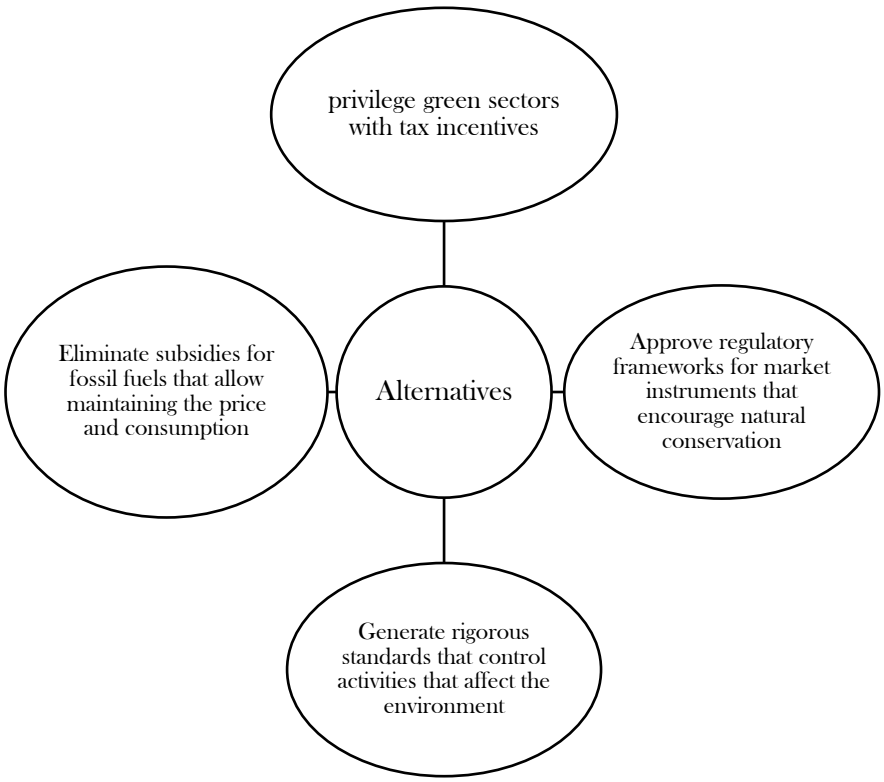

Figure 2. Alternatives to be implemented in the public sector in general

To optimize the implementation of this model, taking into account the above and studies carried out by UNEP in the report Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication, to potentiate and achieve a green economy requires an annual investment on 2% of global GDP, which would allow maintaining the current rate of economic growth and in turn achieving changes towards sustainable processes [54]. Additionally, the States must promote fiscal incentives, command and control measures, and economic instruments that help to conserve natural resources [55, 56]. All investments, together with political reforms, must promote the transformation of the sectors involved in the green economy to acquire a competitive position in the long term [57, 58].

The reconfiguration of the economy towards the framework of sustainability can lead to eco-efficiency, that is, to the more efficient use of natural resources and benefits to society, such as the generation of "green jobs," and at a macro-level to reduce poverty, minimize income inequalities, and thus achieve an economy with inclusive growth [59]. To achieve this end, the options are wide and varied, including from the direct generation of green jobs, access to environmental goods and services by marginalized communities, the structuring of specific conditional cash transfer strategies, direct subsidies to certain industrial sectors, and the restructuring of the national public procurement policy [60, 61].

Yeyanran & Qiang state that in addition to the proposed investments, it is necessary to consolidate aspects such as solid regulatory frameworks, limiting spending in areas that deplete natural resources, applying taxes and market-based instruments that allow modifying the preferences of the consumers and stimulate green investment and innovation, investment in training and capacity building, as well as strengthening governance processes at all levels[62].

Also, Saikku proposes the need for regulatory or standardization schemes in the field of environmental law aimed at sectors such as:

- Energy-efficient construction.
- Increase in emission standards for vehicles.
- The percentage increase in the energy matrix of countries with renewable energies.
- The economic management of waste and recycling.
- Planned urban development and transportation, where alternative means are taken into account.
- The eco-labeling of mass consumer products.

Other important considerations to achieve the transition to a green economy are found at the international level in multilateral environmental agreements [63], where legal and institutional frameworks are established to address global environmental challenges [64]. These agreements include the United Nations Framework Convention on Climate Change (UNFCCC) and the renewal of a post-Kyoto agreement for carbon [65, 66]. But in the same way, all these considerations cannot be addressed indistinctly for all countries, but a differential way must be proposed in terms of the approach to the green economy, for which it is proposed to divide the countries into three groups with certain characteristics [67, 68], but at the same time with some degree of responsibility, as follows:

- Developed countries have a pioneering role and are obligated to modify their production and consumption patterns.
- Developing countries: with the possibility of achieving their objectives within the schemes of sustainability.
- Industrialized countries: which must guarantee financial and technological aid to developing countries.

5. Criticisms of the green economy

Civil society groups and governments have criticized the transition to a green economy, taking into account that it does not adequately or address social, economic, and ecological aspects, pillars of sustainable development [69], but, on the contrary, it can become a new framework for sustainable development, replacing the three pillars mentioned [70]. The United Nations Environment Program states that "the achievement of sustainability depends considerably on the adequacy in the economy," making it necessary to examine the concept of a green economy and how it would be promoted in economic, ecological, and social terms sustainability within it.

Another criticism that appears is the economic nature of the green economy, which, although it is based on the production of more sustainable sectors that allow reducing environmental problems, continues to have accumulation and infinite growth as an economic pattern [71, 72]. For Droste overcoming the current economic order would imply the need to convert economic production to physical terms so that the finite capacity of natural resources and assimilation of the waste of anthropic activity on the planet becomes evident. Unmüßig and Diyar affirm that the green economy is an inappropriate term, scientific and philosophical mistake, with which sustainable development and the eradication of poverty will not be achieved. Montefrio & Dressler also add that it was built from ambiguities without scientific or philosophical support. On the contrary, it will legitimize the opening of markets, creating more tension with the ecological and cultural diversity of the planet and humanity.

In the ethical debate, it is pointed out that the green economy is framed in neoliberal fundamentalism, a model of anthropocentric vision [73], for which, therefore, the need to address other forms of relationship between beings arises. Humans with their environment [74] explore the meaning of other worldviews and/or cultural patterns based on recognizing the rights of nature, exposed by some Latin American societies [75, 76]. From radical social sectors, the green economy is nothing more than the prevailing model with the name of green, distant from the current paradigm, which has domination of nature to extract the greatest possible benefits for business and the market [77]. It does not look for another paradigm of the economy of preservation, conservation, and sustainability of all life [78, 79].

6. Conclusions

The green economy becomes a model that promotes growth, the creation of income and jobs, "green jobs," which seeks to change the interaction between economic progress and environmental sustainability, particularly if wealth is measured by taking natural assets into account and not just productivity. Along with the above, it also contributes substantially to reducing social inequality between countries and eradicating poverty in the world. In the same way, it is necessary to address ways that manage to nullify the ideas of market liberalization and promote trade relations on equal terms between the North and the South.

It should be noted that the implementation of the green economy can achieve technological changes that allow the adoption of environmentally sustainable strategies, which make responsible use of natural resources, and that the waste from its activity can be reincorporated into the production process reducing this forms the causes of pollution. But to achieve the objectives proposed by the green economy, the proposed alternatives must be accepted and developed by both developed and developing countries through the allocation of necessary economic resources, greater rigor in environmental regulations, the creation of subsidies, to friendly activities with the environment and the optimization of the planning processes of the territory. Likewise, it is necessary to create a new economic framework that allows countries to agree on the same level without losing sight of the fundamental premises of sustainable development.

Finally, the green economy seeks within its objectives the eradication of poverty and the inclusion of vulnerable social sectors to achieve economic development within parameters of sustainability, that is, the maintenance of a healthy environment and the proper use of resources. Ecosystem services, both for the present generation and for future generations.

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