Green Economy Management: the Role of Sustainable Finance in Environmental Goals

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UDC: 371; **EDN:** QIOTDU; **JEL:** Q56, Q57
DOI: 10.58587/18292437-2025.6-152
Keywords and phrases: Green Economy, Environmental Goals, Economic Challenges, Sustainable Finance

Կանաչ տնտեսության կառավարում. կայուն ֆինանսավորման դերը շրջակա միջավայրի նպատակներին հասնելու գործում

Գոռաքեյան Գուրգեն Ա.
տ.գ.թ. ֆինանսական շուկաների և ինստիտուտների ամբիոնի դասախոս,
Հայկական պետական տնտեսագիտական համալսարան (Երևան, ՀՀ)

Ամփոփագիր. Կանաչ տնտեսության անցումը համաշխարհային հրամայական է, որը վերակերտում է տնտեսական աճի մոտեցումները՝ միաժամանակ պաշտպանելով շրջակա միջավայրը և խթանելով սոցիալական արդարությունը: Այն ուղղված է մարդկային բարեկեցության բարելավմանը և էկոլոգիական ռիսկերի նվազեցմանը՝ հիմնվելով էներգաարդյունավետության, ցածր ածխածնային զարգացման ու ռեսուրսների օպտիմալ օգտագործման սկզբունքների վրա:
Կայուն ֆինանսները այս անցման հիմնական շարժիչն են՝ շրջակա միջավայրի, սոցիալական և կառավարման գործոնները ինտեգրելով ֆինանսական որոշումներում և կապիտալն ուղղորդելով էկոլոգիապես ու սոցիալապես կայուն նախագծեր: Միջազգային շրջանակներն ու սկզբունքները կարևոր դեր են խաղում շուկայի կարգավորման և բնության պահպանության նպատակների ինտեգրման հարցում:
Հարավային Կովկասի տարածաշրջանում, ներառյալ Հայաստանում, կանաչ անցումը բախվում է կլիմայական փոփոխությունների, ռեսուրսների սպառման և զարգացման պատմական մոդելների մարտահրավերներին: Չնայած քաղաքական ու կարգավորող խոչընդոտներին՝ տարածաշրջանում ձևավորվում է կայուն ֆինանսական միջավայր՝ միջազգային կազմակերպությունների և ազգային նախաձեռնությունների աջակցությամբ:
Հայաստանի համար, որը խոցելի է կլիմայական փոփոխությունների, էներգետիկ կախվածության, ջրային ճգնաժամի և անտառահատման առումով, կանաչ տնտեսությունը առաջնահերթություն է: Երկիրը սահմանել է վերականգնվող էներգիայի ընդլայնման և անտառապատման նպատակներ: Կայուն ֆինանսական համակարգի զարգացումը ներառում է Կենտրոնական բանկի ուղեցույցների ընդունում, կանաչ տաքսոնոմիայի մշակում և կայուն պարտատոմսերի թողարկում: Միջազգային գործընկերները տրամադրում են ֆինանսական ու տեխնիկական աջակցություն՝ նպաստելով կանաչ ներդրումների աճին տարբեր ոլորտներում:
Հանգուցաբառեր և բառակապակցություններ՝ Կանաչ տնտեսություն, շրջակա միջավայրի նպատակներ, տնտեսական մարտահրավերներ, կայուն ֆինանսներ

Управление зеленой экономикой: роль устойчивого финансирования в достижении экологических целей

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Аннотация. Переход к «зелёной» экономике – это глобальный императив, который меняет подходы к экономическому росту, одновременно защищая окружающую среду и содействуя социальной справедливости. Он направлен на повышение благосостояния людей и снижение экологических рисков на основе принципов энергоэффективности, низкоуглеродного развития и оптимального использования ресурсов. Устойчивое финансирование является ключевым фактором этого перехода, интегрируя экологические, социальные и управленческие факторы в финансовые решения и направляя капитал на экологически и социально устойчивые проекты. Международные рамки и принципы играют важную роль в интеграции рыночного регулирования и задач охраны природы.

В регионе Южного Кавказа, включая Армению, «зелёный» переход сталкивается с проблемами изменения климата, истощения ресурсов и устаревших моделей развития. Несмотря на политические и регуляторные препятствия, в регионе формируется устойчивая финансовая среда, поддерживаемая международными организациями и национальными инициативами. Для Армении, которая уязвима к изменению климата, энергетической зависимости, водному кризису и вырубке лесов, «зелёная» экономика является приоритетом. Страна поставила перед собой цели по расширению использования возобновляемых источников энергии и лесовосстановлению. Развитие устойчивой финансовой системы включает в себя принятие руководящих принципов Центрального банка, разработку «зелёной» таксономии и выпуск устойчивых облигаций. Международные партнеры оказывают финансовую и техническую поддержку, способствуя росту зеленых инвестиций в различных секторах.

Ключевые слова и фразы: зелёная экономика, экологические цели, экономические проблемы, устойчивое финансирование

The transition to a green economy is a global imperative, fundamentally reshaping how nations pursue economic growth while safeguarding environmental integrity and promoting social equity. Defined as an economy that improves human well-being and social equity while significantly reducing environmental risks and ecological scarcities, the green economy is underpinned by principles of well-being, justice, good governance, energy efficiency, low-carbon development, planetary boundaries, and resource efficiency [**1**].

Sustainable finance emerges as the pivotal mechanism to facilitate this transition, integrating environmental, social, and governance (ESG) considerations into financial decision-making to channel capital towards environmentally and socially beneficial projects [**5**].

Globally, the urgency of scaling sustainable finance is evident, with significant funding gaps for achieving the UN Sustainable Development Goals (SDGs) [**7**]. International frameworks, including the SDGs, Principles for Responsible Investment (PRI), and Green Bond Principles (GBP), are standardizing practices and fostering integrity in this burgeoning market, increasingly incorporating nature-related objectives alongside climate considerations [**8**].

The South Caucasus region, including Armenia, faces unique environmental challenges stemming from climate change, resource depletion, and historical development models [**10**]. Despite progress in adopting green policies, the pace of transition remains slow, hampered by political instability, outdated regulatory frameworks, and insufficient green investment [**10**]. However, the region is witnessing a nascent but growing sustainable finance landscape, supported by international financial institutions and national policy initiatives [**6**].

Armenia, a nation highly vulnerable to climate impacts and grappling with energy dependence, water stress, and deforestation, has articulated ambitious national environmental goals, including significant renewable energy expansion and forest restoration targets [**9**]. Its sustainable finance ecosystem is rapidly developing, marked by the Central Bank's Sustainable Finance Roadmap, the ongoing creation of a national green taxonomy, and pioneering sustainability-linked bond issuances [**12**]. International partners, including the World Bank, EBRD, GCF, and IFC, are providing substantial financial and technical support, catalyzing green investments across various sectors [**11**].

The global discourse on economic development has profoundly shifted from a singular focus on growth to an integrated understanding that prosperity must be achieved within ecological limits and with social equity. At the heart of this paradigm is the concept of the green economy, a comprehensive framework for sustainable development. Complementing this vision, sustainable finance has emerged as the indispensable mechanism for translating environmental aspirations into tangible economic actions.

The most widely recognized and authoritative definition of a green economy, provided by the United Nations Environment Programme (UNEP), describes it as "one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities". In its most straightforward expression, a green economy is characterized by being low carbon, resource efficient, and socially inclusive [**2**]. It functions as a broad policy agenda and a vital tool to support the achievement of sustainable development, emphasizing the alignment of economic objectives with social and environmental imperatives.

The foundation of the green economy rests upon several core principles that guide its implementation and impact:

- Wellbeing: This principle champions a people-centric model, aiming to enhance overall human well-being not solely in economic terms but also across human, social, physical, and cultural capital. It prioritizes universal access to knowledge and education, fosters the adoption of environmentally friendly production technologies and processes, and promotes sustainable

infrastructure, all designed to enable individuals and communities to thrive while ensuring the sustainable stewardship of nature and natural resources [**3**].

- Justice and Good Governance: A green economy is intrinsically linked to robust governance, built upon accountable, transparent, and resilient institutions. It advocates for decentralized decision-making and open dialogue, actively working to prevent vested interests from unduly influencing policy. This principle promotes inclusivity and fairness, striving to reduce disparities in income and opportunities and empowering marginalized groups. Effective governance ensures that decisions are informed by a blend of scientific research, economic analysis, and invaluable local knowledge, thereby shaping a financial system that prioritizes long-term societal well-being over short-term gains [**3**].
- Energy-efficiency & Low-carbon Development: This aspect of the green economy centers on the efficient utilization of resources, promoting circular models to minimize waste. It seeks to rebalance conventional consumer-driven models towards more sustainable patterns of natural resource consumption. A critical component is the widespread adoption of renewable energy sources, such as solar, wind, hydroelectric, and hydrogen, which generate minimal or no CO2 emissions. This approach is designed to foster wealth creation, enhance resilience, and improve well-being for current and future generations, all while strictly adhering to the planet's ecological limits [**3**].
- Planetary Boundaries: Central to the green economy is the profound recognition and respect for Earth's ecological limits. This principle mandates the preservation of natural capital and directs investments towards the conservation, expansion, and restoration of natural systems. It embodies a precautionary approach to social and environmental impacts, ensuring that economic activities do not overstep the planet's capacity to regenerate and sustain life [**4**].
- Efficiency and Sufficiency: This principle advocates for sustainable production and consumption patterns. It embraces low-carbon, resource-efficient, diverse, and circular economic models. It acknowledges the global necessity of shifting consumption of natural resources to sustainable levels. This involves aligning economic incentives with societal costs, encouraging responsible consumption, and addressing both issues of over-consumption and ensuring the fulfillment of basic needs [**4**].

The green economy concept necessitates the integration of economic and environmental policies in a manner that not only identifies new avenues for economic growth but also meticulously avoids placing unsustainable pressure on the quality and quantity of natural assets [**1**]. This integration is achieved through a diverse array of measures, ranging from economic instruments such as taxes, subsidies, and trading schemes, to regulatory policies including the setting of environmental standards, and non-economic measures like voluntary approaches and information dissemination [**1**]. The scope of the green economy is expansive, encompassing various sectors such as energy, forestry, agriculture, and tourism, and addressing critical topics like pollution and water efficiency. It also describes underpinning strategies, notably the mainstreaming of environmental policies and the development of supportive economic structures, including the circular economy and bioeconomy concepts [**1**].

The green economy represents a holistic paradigm shift, transcending a mere environmental initiative to explicitly link economic growth with social equity and environmental preservation. The principles underpinning the green economy are not isolated; rather, they are deeply interconnected and mutually reinforcing. For instance, achieving energy efficiency through the deployment of renewable energy sources directly contributes to low-carbon development and a reduction in environmental risks. Simultaneously, robust good governance is indispensable for the effective implementation of regulatory policies and decentralized decision-making, which in turn ensure justice and well-being. The circular economy, recognized as a key component of an inclusive green economy, exemplifies the principle of efficiency and sufficiency by focusing on waste minimization and closed-loop systems. [**2**]. This integrated perspective implies that progress in one area, such as renewable energy adoption, can generate positive ripple effects across multiple principles, leading to enhanced energy security, reduced pollution, new job creation, and improved human well-being.

Sustainable finance is fundamentally about integrating environmental, social, and governance (ESG) information into the core decision-making processes of companies and financial institutions [**5**] This integration is not merely a compliance exercise but a crucial tool for proactively managing climate and other sustainability risks, while simultaneously addressing society's escalating expectations for a more sustainable economy. By doing so, sustainable finance serves as a powerful driver of financial stability and resilient economic growth [**5**].

The Conference of the Parties (COP) serves as an annual international climate meeting orchestrated by the United Nations. These gatherings bring together countries that are "party to" the U.N. Framework Convention on Climate Change

(UNFCCC), an international treaty committed to preventing "dangerous anthropogenic [human induced] interference with the climate system" [**13**]. At these critical summits, government representatives convene to report on national progress towards climate goals, set new intermediate targets, facilitate agreements for sharing scientific and technological advancements, and negotiate future policy directions [**13**].

A landmark achievement of these conferences was the 21st session, COP21, which resulted in the Paris Agreement. This accord mobilized global collective action with the ambitious aim of limiting the global temperature increase to 1.5°C above pre-industrial levels by 2100, alongside a commitment to adapt to the already existing effects of climate change [**14**]. COPs represent the world's highest decision-making body on climate issues and are among the largest international meetings, drawing tens of thousands of delegates, including heads of state, world leaders, non-governmental organizations, companies, youth groups, and civil society representatives, all working to build consensus and advance climate action [**14**].

The global landscape is witnessing an accelerating shift towards green economic models, driven by both the escalating impacts of climate change and the recognition of new economic opportunities. This macro-level transition is heavily reliant on the effective deployment of sustainable finance. However, the pace and nature of this transition vary significantly across regions, with the South Caucasus presenting a unique set of challenges and opportunities.

Globally, there is a profound and growing recognition that achieving comprehensive sustainability is contingent upon "getting the economy right" [**1**]. This involves a deliberate and strategic integration of economic and environmental policies. The transition towards a green economy is not a singular action but a multifaceted endeavor, employing a diverse mix of economic instruments such as taxes, subsidies, and trading schemes; regulatory policies like the setting of stringent environmental standards; and non-economic measures, including voluntary approaches and information dissemination campaigns [**1**].

A robust and expanding international ecosystem of frameworks, guidelines, and initiatives is actively shaping the landscape of sustainable finance. These instruments are designed to promote consistency, transparency, and accountability in the integration of environmental, social, and governance (ESG) considerations into financial decision-making processes. Their collective aim is to guide capital towards sustainable outcomes and ensure the integrity of green investments.

Key frameworks and initiatives that are instrumental in this global effort include:

- United Nations Sustainable Development Goals (SDGs): These 17 interconnected global goals address a comprehensive range of challenges, including poverty eradication, climate change mitigation, reduction of inequality, and the pursuit of sustainable development across all facets of society. Sustainable finance is explicitly designed to align with and accelerate the achievement of these critical goals [**7**].
- Principles for Responsible Investment (PRI): A leading global initiative, the PRI encourages and supports investors in integrating ESG factors into their investment analysis and decision-making processes. Signatories commit to promoting sustainable practices through active engagement with the companies in which they invest, providing a framework for assessing and reporting on ESG integration and stewardship activities [**8**].
- Green Bond Principles (GBP): These voluntary guidelines, established by the International Capital Market Association (ICMA), are pivotal in promoting transparency, integrity, and comprehensive disclosure in the issuance and management of green bonds. The GBP provide clear guidance on the use of proceeds, rigorous project evaluation and selection processes, and consistent reporting, thereby ensuring that green bonds genuinely finance environmentally sustainable projects [**8**].
- Sustainability Accounting Standards Board (SASB): SASB develops industry-specific standards for the disclosure of financially material ESG information. These standards assist companies in identifying and reporting on the sustainability factors most relevant to their particular industry, enabling investors to make more informed investment decisions based on standardized and comparable ESG data.
- Task Force on Climate-related Financial Disclosures (TCFD): The TCFD develops recommendations for companies to disclose climate-related financial risks and opportunities. Its objective is to enhance transparency for investors by encouraging companies to assess and report on the potential impact of climate change on their business operations, strategic direction, and overall financial performance [**8**].
- Equator Principles (EP): This is a risk management framework adopted by financial institutions for assessing and managing the environmental and social risks associated with project financing. The EP provide guidelines for responsible project financing and mandate adherence to internationally recognized

environmental and social standards, particularly for large-scale projects.

Since the 1990s, the countries of Eastern Europe, the Caucasus, and Central Asia (EECCA), including the South Caucasus nations, have embarked on a journey of profound transformation, moving towards market economies and democratic societies while simultaneously striving for environmentally sustainable economic development. Significant progress has been made in this regard; all EECCA countries have formally adopted the 2030 Agenda for Sustainable Development and the Paris Agreement, translating these global commitments into national strategies and policies [**10**]. This has led to the introduction of various policies, instruments, and approaches that have strengthened environmental protection and laid foundational groundwork for a greener economy. Indicators show some positive signs in resource productivity and environmental quality across the region.

Despite the prevailing challenges, the South Caucasus region has initiated efforts to mobilize finance for its green transition, reflecting a growing awareness of the need to align financial sector objectives with national climate and environmental targets. This landscape is characterized by a mix of international support and emerging domestic policy frameworks.

Armenia has set clear and ambitious targets for its green transition, particularly in renewable energy and forest restoration. The progress in solar energy, reaching 13% of total production by 2024, demonstrates strong momentum towards its 2030 goal of 15%. However, achieving the broader renewable electricity targets and significant forest cover increase will require sustained effort and investment. The detailed targets provide a clear roadmap for both public and private sector engagement in these critical areas.

The data clearly illustrates the severe environmental and economic vulnerabilities Armenia faces. Its heavy reliance on imported natural gas not only impacts energy security but also contributes significantly to GHG emissions. The projected temperature increases and their cascading effects on agriculture and the broader economy highlight the urgent need for adaptation and mitigation. The substantial economic costs associated with deforestation and land degradation underscore the financial imperative of conservation and restoration efforts. These challenges are interconnected, emphasizing the need for holistic, integrated solutions that sustainable finance can help enable.

The data highlights a growing and diversified sustainable finance landscape in Armenia. The IFC's sustainability-linked bond is a significant step, demonstrating how financial instruments can directly incentivize corporate environmental performance. The substantial investments from the World Bank and EBRD, particularly through the GEFF, are crucial for catalyzing green projects and achieving measurable environmental benefits like energy savings and CO2 reductions. These commitments underscore the international community's confidence in Armenia's green transition and the potential for private capital mobilization.

The allocation of UN funding in Armenia reflects a strategic emphasis on "Affordable and Clean Energy," receiving the largest share at 16%. This aligns with Armenia's national priorities for energy independence and renewable energy expansion. While "Climate Action" and "Life on Land" also receive dedicated funding, their proportions (4.8% and 3.3% respectively) suggest that while important, they are part of a broader development agenda that includes social and economic SDGs. This distribution indicates a balanced approach to sustainable development, recognizing the interconnectedness of environmental, social, and economic objectives.

Conclusion

One kind of non-life insurance is agriculture insurance. Usually, it protects against weather hazards and pays for the loss of crops, cattle, or fodder. Agricultural insurance can safeguard low-income farmers against revenue loss and help with reconstruction expenditures.

The transition to a green economy is a global and urgent issue, and sustainable finance is a key tool for its implementation. Despite the development of international frameworks, the South Caucasus region, and Armenia in particular, faces the challenges of severe climate change, resource constraints, and historical development models.

Armenia, with its high vulnerability, has formulated ambitious goals, focusing on the development of renewable energy, afforestation, and ecosystem protection. A sustainable financial ecosystem is already being formed in the country, with the development of a national taxonomy, clarification of CB policy, and the introduction of financial instruments based on sustainability. The support of international partners brings additional resources and expertise.

Hosting COP17 in Armenia is a strategic opportunity to strengthen the country’s role in environmental issues, attract investments for biodiversity conservation, and accelerate the implementation of green policies.

Recommendations: Strengthening the regulatory framework: Complete the creation of a

national green taxonomy and develop mandatory standards for the publication of SCM data. This will increase the transparency of investments and reduce the risks of "greenwashing".

1. Attracting targeted investments. Focusing resources on key sectors.
2. Expanding renewable energy infrastructure.
3. Effective water resource management and pollution reduction.
4. Promoting climate-resilient agriculture.
5. Implementing forest and wetland restoration projects.

Awareness and capacity building. Organize training for financial institutions, government agencies and businesses on sustainable finance, SCM assessment and biodiversity risks. Conduct a broad public awareness campaign.

Deepening international cooperation. Actively use technical assistance and financing from international financial institutions to reduce the risks of green projects and attract private capital.

Supporting innovation and local solutions. Create an enabling environment for green startups and SMEs that offer ecological solutions that are appropriate to local conditions.

Integrating biodiversity into financial decisions: Integrate climate-related risks and opportunities into ODA policies. This will help mobilize resources for the conservation and restoration of Armenia's natural capital.

Transparency and demonstration of results: Develop a robust system for monitoring and reporting on green investments and their environmental impacts. Systematically present achievements to create a win-win environment and strengthen Armenia's image as a model for sustainable development.

Implementing these steps will allow Armenia to effectively use sustainable finance to accelerate the transition to a green economy, address environmental challenges, and become a positive role model for sustainable development in the region, especially by building on the momentum gained from COP17.

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Сдана / Հանձնվել է՝ 01.12.2025
Рецензирована / Գրախոսվել է՝ 08.12.2025
Принята / Ընդունվել է՝ 12.12.2025