

THE INSTITUTIONAL ISSUES OF COOPERATION IN BUILDING A GREEN ECONOMY IN CAUCASIAN REGION

Arman MARTIROSYAN

Doctor of Science in Economics, Professor at Yerevan State University

Margarita YEGHIAZARYAN

Ph.D. Yerevan State University

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Introduction

Economic growth and development in developed and developing countries inevitably lead to problems of environmental pollution. The Earth faces the great problem of air and water pollution, which is the imperative of building a green economy for all humanity. According to various estimates over the past eighty years, the average temperature on our planet has increased up to 1.2°C, the concentration of CO₂ increased up to 25%, and methane by 100%. If every 20 years it increases by 0.3 degrees, while we do nothing, by the most optimistic scenario this trend will continue and after 20 years we will have the same indicators. In the worst-case scenario, it will take a maximum of 15 years.

A green economy is an economic framework aimed at fostering sustainable development while minimizing environmental risks and ecological scarcities. It focuses on reducing carbon emissions, increasing energy efficiency, and promoting the use of renewable energy sources. The green economy aims to balance economic growth with environmental stewardship, ensuring that natural resources are used responsibly to meet current and future needs [Richardson, 2013]. The issues of building a green economy receive more importance in developing countries. Developing countries should cooperate in building a green economy because in this case, they have the opportunity to share knowledge, technologies, and best practices tailored to similar economic and environmental contexts. Pooling resources can help overcome individual limitations and enhance collective capacity for green initiatives. Besides, joint projects could reduce costs through economies of scale, making green technologies and sustainable practices more affordable.

Many environmental challenges, such as air and water pollution cross national borders. Regional cooperation can address these issues more effectively. Moreover, regional collaborations can attract larger investments and funding from international organizations [UNRSID, 2011]. Collaborative efforts can spur innovation, with countries learning from each other's successes and failures. Joint research and development can lead to the creation of more effective and locally adapted green technologies. Finally, developing countries could support each other in building the necessary technical and institutional capacities to implement green economy strategies. Training programs and exchange initiatives

could enhance local expertise and skills. By forming alliances, developing countries can have a stronger voice in international forums and negotiations on environmental policies and climate change. The transition to a green economy is vital for sustainable development, addressing climate change, and ensuring economic resilience. Regional cooperation plays a crucial role in this transition by fostering shared knowledge, resources, and policies among neighboring countries or regions [UNEP, 2011]. This highlights the cooperation of regional countries – Armenia, Azerbaijan, Georgia to build a green economy.

Methodology and literature review

To understand issues of the green economy and find out the methodology of analysis we first studied theoretical and practical literature, materials, and publications available in Armenian, Russian, and English languages. The green economy is defined by the United Nations Environment Programme (UNEP) as an economy that results in improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities. It involves green investments in sectors such as renewable energy, sustainable agriculture, and green infrastructure, aiming to create jobs and promote sustainable growth. We could find many scientific articles and books related to the issues of a green economy. For example, Robert B. Richardson in his "The Economics of the Green Economy: The Transition to Sustainability" book explores the economic principles and policies underpinning the green economy, including market-based mechanisms, sustainable development, and green growth strategies. Robert B. Williams in "Greening the Economy: Integrating Economics and Ecology to Make Effective Change" book integrates ecological and economic perspectives, providing a comprehensive overview of the green economy and practical approaches to achieving sustainable change [Williams, 2010]. Craig Calhoun and Benjamin Y. Fong in "The Green New Deal and the Future of Work" book discuss the Green New Deal's potential impact on the economy, job creation, and sustainable development, providing a critical analysis of its feasibility and implications. The book "Prosperity without Growth: Foundations for the Economy of Tomorrow" by Tim Jackson critically examines the concept of economic growth and advocates for a green economy that prioritizes ecological sustainability and human well-being over continuous economic expansion [Jackson, 2016]. Many international organizations are interested in this issue and have developed different programs to contribute to building a green economy. For example, The European Union (EU) has been a leader in regional cooperation for the green economy, implementing policies such as the European Green Deal, which aims to make Europe climate-neutral by 2050. The EU's Emissions Trading System (ETS) is another example of a successful regional approach to reducing greenhouse gas emissions. The Association of Southeast Asian Nations (ASEAN) has developed initiatives like the ASEAN Plan of Action for Energy Cooperation (APAEC) to promote renewable energy and energy efficiency across member states. The ASEAN Economic Community (AEC) also includes environmental sustainability as a key com-

ponent of its economic integration agenda. African Union (AU)'s Agenda 2063 emphasizes sustainable development and includes programs for green energy, climate resilience, and sustainable land management. The African Continental Free Trade Area (AfCFTA) also provides a framework for promoting green economic growth across the continent. Various international organizations pay great attention to the issues of the green economy in the Caucasus region [RUEA, 2024]. The European Bank for Reconstruction and Development (EBRD) has already invested significantly in green technologies in Armenia, indicating a strong foundation for further cooperation [UNDP, 2024]. The EU4 Environment program, funded by the European Union, is actively working to promote green growth and environmental preservation in Eastern Partnership countries, including Armenia, Azerbaijan, and Georgia. This program provides a platform for both countries to engage in cooperative projects and access funding and expertise for sustainable development [EU 4 Environment, 2021]. In general, key aspects of the green economy include:

1. Sustainable Agriculture: Practices that maintain soil health, reduce water usage, and minimize chemical inputs.
2. Renewable Energy: Investing in and using sources like solar, wind, and hydropower to reduce reliance on fossil fuels.
3. Energy Efficiency: Enhancing energy use in buildings, transportation, and industries to lower emissions and costs.
4. Waste Reduction: Implementing recycling and waste management practices to reduce landfill use and pollution.
5. Green Jobs: Creating employment opportunities in industries that contribute to environmental sustainability, such as renewable energy and conservation.
6. Sustainable Transportation: Promoting public transit, electric vehicles, and other low-emission transportation options.
7. Ecosystem Preservation: Protecting natural habitats and biodiversity to maintain ecological balance.

The article tries to find challenges and opportunities for regional cooperation in the green economy by the example of Armenia, Georgia, and Azerbaijan. Therefore, whole countries of the world are priority-oriented in partnership with the main principles of the classical political economy - the foundations of the Theory of Absolute, Relative, and Market Advantages. So, in the Caucasian region, oriented on partnership sustainable development, green growth, and green economy couldn't have any alternatives. Methods of Comparative Analysis, Policy Analysis, Data Analysis, and Scenario Planning were used.

Analysis

The green economy presents a promising avenue for Armenia, Georgia, and Azerbaijan to cooperate in ways that benefit both nations environmentally, economically, and so-

cially. By focusing on shared goals and mutual benefits, these countries can work together to create a more sustainable and peaceful future [GCSP, 2023]. International support and engagement can further facilitate this cooperation, ensuring that it contributes to long-term peace and stability in the region. Besides, the green economy has the potential to serve as a bridge for cooperation between Armenia and Azerbaijan by focusing on shared environmental and economic benefits. Given the historical tensions between the two countries, cooperation in this neutral and mutually beneficial area can help build trust and promote peace.

Macroeconomic analysis of Armenia, Azerbaijani and Georgia's economies shows, that they all have strengths and weaknesses. For example, Armenia has a rapidly growing IT sector, driven by a highly educated and skilled workforce. Besides Armenia has a strong diaspora, that makes substantial remittances and investments, and creates a strong global network fostering trade and cultural exchanges. Armenia has great tourism potential due to its rich cultural heritage and historical sites. Developing eco-tourism and adventure tourism sectors attract tourists. Nevertheless, geopolitical risks, limited natural resources, reliance on agriculture, and outdated infrastructure hinder economic growth and development. Ongoing tensions with neighboring countries, particularly Azerbaijan, landlocked geography limits direct access to global markets. The scarcity of natural resources compared to the regional neighbors and dependency on imported energy sources make Armenia's economy more vulnerable. Limited transport and logistics capabilities contribute to the increase in prices of products and services.

The strengths of Azerbaijan's economy include abundant natural resources, strategic geographic location, developed infrastructure, and ongoing economic diversification efforts. Oil and natural gas reserves drive the economy, export of hydrocarbon provides significant revenue. Access to the Caspian Sea and key transport routes and its position as a transit hub for energy and goods between Asia and Europe, investments in infrastructure includes roads, ports, and airports turn the country into a major logistic center.

The weaknesses of Azerbaijan's economy include over-dependence on oil, governance and corruption issues, income inequality, and environmental concerns. Heavy reliance on oil and gas exports makes the economy vulnerable to global price fluctuations. Issues with transparency, governance, and corruption can deter investment. Many international organizations, like the World Bank, UNDP, and The European Bank for Reconstruction and Development (EBRD), say that Azerbaijan needs stronger institutional frameworks and rule of law. Environmental degradation due to oil extraction and industrial activities generates a need for stronger environmental regulations and sustainability practices.

Georgia has experienced steady economic growth, with a growth rate of about 5% in recent years. The economy is driven by services (particularly tourism), agriculture, and mining. The country has also seen growth in information technology and financial servi-

ces. Georgia benefits from its strategic location, facilitating trade between Europe and Asia. It has a free trade agreement with the European Union and other countries. Nevertheless, political instability, regional conflicts, and reliance on external markets pose risks to economic stability. All three countries are strategically located, impacting their trade dynamics, with Georgia and Armenia looking more towards diversification.

Despite their differences, Armenia, Azerbaijan, and Georgia can leverage their strengths through cooperation in the green economy. While historical and political tensions have sometimes complicated direct collaboration, there are several areas where these countries could engage in regional cooperation, often facilitated by international organizations and initiatives.

Armenia, Azerbaijan, and Georgia can cooperate in several key spheres to develop a green economy, leveraging their shared interests and resources to foster sustainable development. For example, Armenia's and Georgia's IT expertise can complement Azerbaijan's resources and infrastructure to develop smart energy solutions. Joint efforts in sustainable agriculture, water management, and eco-tourism can benefit all three economies while fostering regional stability and peace. Here are some specific areas where collaboration could be particularly beneficial:

Of course, on the way to building a green economy, Armenia, Georgia, and Azerbaijan face some important challenges and considerations like historical conflicts, different levels of economic development, varying levels of infrastructure development and access to green technologies, variations in financial and technical resources that could create imbalances in cooperation. In this case, ensuring that the benefits of cooperation are shared fairly can prevent misunderstandings and conflicts. Sharing resources and knowledge can help bridge these gaps. Transparent mechanisms for managing joint projects and resources are necessary. Besides, historical conflicts, especially between Armenia and Azerbaijan, can hinder direct cooperation. Diplomatic efforts and conflict resolution are necessary to facilitate smoother collaboration.

Differences in political systems, priorities, and institutional frameworks can hinder effective collaboration. To ensure successful cooperation sustained political commitment and stability are essential. For long-term collaboration addressing underlying political and security concerns is crucial.

Cultural differences and varying levels of public awareness about environmental issues can affect cooperation. Building trust requires acknowledging and addressing historical grievances and working toward reconciliation. Finally, effective coordination and management structures are needed to handle joint projects and initiatives. Clear communication channels and governance mechanisms must be established.

Cooperation between developing countries, especially regional developing countries like Armenia Azerbaijan, and Georgia, in the green economy is highly advantageous and necessary for global sustainable development [UNSDCF, 2021-2025]. By working together, these countries can leverage their collective strengths, address common challenges, and create a more resilient and sustainable future. International support and frameworks can further facilitate this cooperation, ensuring that these countries can fully realize the benefits of a green economy. Armenian, Georgian, and Azerbaijani economic /market/ integration and formation of a Green Economy will contribute to the development of resilient institutional structures. In this case, we could see the economies of scale effect. With liberalization and economic integration, there will be a reduction in military spending. In Caucasus region countries military spending for some years is more than 3 percent of GDP. Considering indirect effects and institutional circumstances there will be significantly higher. In our region and in the world economy with liberalization and economic integration, we can record the flow of production factors from traditional labor-intensive sectors to knowledge-intensive sectors with less environmental pollution. Therefore, we need to invest the efforts not in the deepening of conflicts and the implementation of military operations, but in realizing the necessity and inevitability of coexistence. In this case, the regulatory role of the international community is very important. In the next step, when trust is established between the countries, competition struggle will start, which will encourage enterprises to adopt green technology that leads to the improvement of production and ecological efficiency. It is clear, that integration processes also contribute to the centralization of pollutants. In this case, imperative narratives of scientific discussions will be green economic aspects of “institutional” productivity. Segmentation of Armenian and Azerbaijan markets inhibits above mentioned effects. Moreover, the market cooperation, and international relationship between Armenia, Georgia, and Azerbaijan green economies products itself, can contain technology and knowledge transfer. Therefore one of the best ways to promote innovation in an industry (Armenia, Azerbaijan, Georgia), to have a Green Economy is to “improve its purchased from other industries.” We believe that the integration and innovation process between Caucasus countries induced the government to adopt technologies that are environment friendly and beneficial to the economy’s sustainability and Green Growth and low-carbon Development of Armenia, Azerbaijan, and Georgia.

References

1. Robert, R, Richardson, Building a Green Economy: Perspectives from Ecological Economics, book, 2013, 213 pages
2. Robert B. Williams , "Greening the Economy: Integrating Economics and Ecology to Make Effective Change, book, 2010, 517 pages
3. Stanislav Shmelev, "Green Economy Reader: Lectures in Ecological Economics and Sustainability", book, 2017

4. Craig Calhoun and Benjamin Y. Fong, "The Green New Deal and the Future of Work", book, 2022, 384 pages
5. Tim Jackson, "Prosperity without Growth: Foundations for the Economy of Tomorrow", book, 2016.
6. Daniel Edgardo Basubas, "A critical examination of the 'green economy' concept as a vehicle for inclusion: a qualitative case study of the Agulhas Plain, South Africa"
<https://grootbosfoundation.org/wp-content/uploads/2024/03/BasubasDanielE2023PhD.pdf>
7. "The Green Economy: Pathways to Sustainable Development and Poverty Eradication" published by UNEP, https://reliefweb.int/report/world/towards-green-economy-pathways-sustainable-development-and-poverty-eradication?gad_source=1&gclid=EAIaIQobChMI-eX5m8DEhwMVh5KDBx1g5wpUEAAYASAAEgIIXvD_BwE
8. Green Economy and Sustainable Development: Bringing Back the Social UNRISD submission to the UNCSD, 1 November 2011, https://cdn.unrisd.org/assets/legacy-files/301-info-files/44AC8E087556E45AC125793D0056E4B7/UNCSD%20input_UNRISD.pdf
9. United Nations's sustainable development cooperation framework for Armenia 2021-2025, United Nations Armenia, 2021, https://unece.org/sites/default/files/2021-05/Armenia_UNSDCF_2021-2025.pdf
10. Towards a green economy in the Eastern Partner Countries, Progress at Mid-term, 2021, EU 4 Environment <https://www.eu4environment.org/app/uploads/2022/08/Armenia-profile-2022.pdf>
11. RUEA-PCPA, Green Economy Development, <https://www.employers.am/activities/scope-of-activity/green-economy-development>

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The article tries to find challenges and opportunities for regional cooperation in the green economy by the example of Armenia, Georgia, and Azerbaijan. The green economy and regional cooperation are intertwined, offering pathways to sustainable development and environmental protection. By leveraging regional strengths and fostering collaborative approaches, Armenia, Georgia, and Azerbaijan can accelerate their transition to a green economy, benefiting both the environment and their populations. Of course, on the way to building a green economy, Armenia, Georgia, and Azerbaijan face some important challenges, and considerations like differences in economic development levels, political systems, and priorities among regional partners can hinder cooperation. Additionally, there are challenges related to financing green projects, technology transfer, and capacity building. Despite these challenges, there are significant opportunities for regions to collaborate on green innovation, create green jobs, and improve environmental sustainability. Regional cooperation can also enhance resilience to climate change and other environmental shocks. Moreover, the market cooperation, and international relationship between Armenia, Georgia, and Azerbaijan green economies products themselves, can contain technology and knowledge transfer. Therefore one of the best ways to promote innovation in an industry (Armenia, Azerbaijan, Georgia), to have a Green Economy is to "improve its' purchased from other industries."