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GREEN ECONOMY IS A TOOL FOR SUSTAINABLE DEVELOPMENT AND COMBATING CLIMATE CHANGE

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Abstract: *This article examines the pivotal role of the green economy as a strategic tool for achieving sustainable development and addressing the challenges of climate change. Emphasizing the interconnectedness of economic activities and environmental preservation, the study explores how the adoption of eco-friendly practices and technologies contributes to a sustainable future. The article discusses the symbiotic relationship between a green economy and the mitigation of climate change, highlighting its potential to foster resilience and balance between economic growth and environmental stewardship. Through an analysis of key principles and successful implementations, the research underscores the significance of embracing a green economy paradigm in the pursuit of a sustainable and climate-resilient future.*

Keywords: *sustainable development, renewable energy sources, environmentally conscious economy, digital transformation in the economy, climate change.*

The 21st century has witnessed unprecedented changes in the Earth's climate, with global warming becoming a pressing concern for the international community. Since the 19th century, the average surface temperature of the planet has risen by 1 °C, marking an alarming rate of climate warming that surpasses any previous recorded event. This seemingly small increase in temperature necessitates the generation of an enormous amount of heat. In fact, the rate of temperature rise during this period is eight times faster than the post-Ice Age period, and certain regions, such as the Arctic and Antarctic, experience even more pronounced warming, leading to the melting of glaciers. Climate change has caused a myriad of disasters worldwide, leading to devastating consequences for both the environment and human societies. Floods and rising sea levels plague some regions, while others face droughts and agricultural destruction. The repercussions of these natural disasters extend beyond environmental concerns, severely impacting the economies of affected countries. For instance, Eurostat reports that over the past decade, climate change has cost the European Union an estimated 145 billion euros, primarily due to droughts and forest fires caused

by hot weather[1]. Similarly, in the United States, climate-related disasters in 2022 alone amounted to a staggering 165 billion dollars, with major hurricanes contributing significantly to this figure.[2] Understanding the detrimental effects of climate change on national economies is crucial for formulating effective strategies to mitigate its impacts. The consequences of climate change manifest in various sectors, resulting in substantial damages.

Firstly, high energy costs emerge as a consequence of climate change as people strive to adapt to the changing environment. The demand for energy rises, leading to increased costs for businesses, households, and consumers alike.

Secondly, climate change disrupts weather patterns, negatively affecting the tourism industry. Destinations that experience warmer temperatures and increased rainfall become less attractive to potential visitors, leading to a decline in tourism revenue.

Thirdly, changes in temperature and precipitation patterns have adverse effects on agricultural production. Reduced yields can result in higher food prices and scarcity of certain crops, thereby affecting food security and stability. Furthermore, extreme weather events, including floods and hurricanes, caused by climate change can devalue properties in certain areas, diminishing property values. In addition, rising insurance costs become a significant concern as insurance companies increase premiums to cover losses resulting from extreme weather events. This burden affects both individuals and businesses. Moreover, climate risks pose threats to the stability of the financial system. Financial losses resulting from climate-related natural disasters, increased food prices due to adverse effects on agriculture, inflation caused by price overruns, and the challenges of transitioning to a sustainable low-carbon economy all contribute to the vulnerability of a country's financial stability. Uzbekistan, like many other countries, faces substantial economic damages as a consequence of climate change. Annual floods and earthquakes impact the lives of approximately 1.4 million Uzbeks and cost the economy an estimated $3 billion. Furthermore, a significant number of public buildings and assets in Uzbekistan are situated in flood-prone areas, leading to substantial damage. For instance, floods are predicted to affect 34% of Tashkent's main roads, 18% of schools, and 23% of hospitals. Looking ahead, the country anticipates substantial damage from

[1] Losses from climate change: €145 billion in a decade - Products Eurostat News – Eurostat (https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20221024-1)
[2] Major Climate Disasters Cost the U.S. $165 Billion in 2022 | Time (https://time.com/6246108/2022-billion-dollarclimate-disasters-noaa/)

recurring and severe droughts[3]. To effectively combat climate risks and mitigate their consequences, it is imperative to gather accurate and regular information regarding economic damages and track weather changes meticulously. As the saying goes, to solve a problem, one must first measure it. By recognizing the detrimental impact of climate change on the economy and understanding its specific effects on Uzbekistan, policymakers and stakeholders can develop strategies and initiatives to promote sustainable development and foster a green economy, ensuring a resilient and prosperous future for the country. New research published in the journal Nature warns that if climate change is not addressed, it could have a severe impact on the global economy and hinder growth in the coming decades. The study indicates that unmitigated global warming will lead to a 23% decrease in global GDP per capita by 2100 compared to a scenario without any warming. The economic consequences could be even worse as the study focuses solely on the effects of temperature increase and does not consider other factors such as sea level rise and storms. The research suggests

that reducing emissions could provide significant economic benefits. Previous studies have also highlighted the potential damage of climate change on economic growth. A recent Citigroup report emphasized that limiting temperature rises to 2.7ºF (1.5ºC) could reduce global GDP loss by $50 trillion compared to a rise of 8.1ºF (4.5ºC). The study explains that warming affects productivity in both agricultural and non-agricultural sectors, with the impact on crops being welldocumented. However, the reasons behind the decrease in productivity for workers in other fields due to warm weather are still not fully understood. The study further reveals that the anticipated temperature spike will not impact all regions equally, with productivity peaking at an average temperature of 55ºF (13ºC). This suggests that warming might actually increase productivity in cold northern countries while severely affecting the tropics, potentially exacerbating global inequality. The research serves as a timely reminder as world leaders are set to meet at a United Nations climate change conference in Paris later this year. The hope is that the evidence of the economic effects will spur developing countries to take strong action to address climate change[4]. The study's findings highlight the urgent need for action to combat climate change. According to Samuel Fankhauser and Richard S.J. Tol[5], climate change has 2 kinds of impact. The

[3] Ministry of Economic Development and Poverty Reduction of the Republic of Uzbekistan, The World Bank, and the United Nations Development Programme, 2022. Uzbekistan: Choosing an Innovative and Green Future. Note. © World Bank."

[4] Climate change growth: How Global Warming Affects Economy | Time (https://time.com/4082328/climatechange-economic-impact/)

[5] On climate change and economic growth Samuel Fankhauser , Richard S.J. Tol.

primary impact is observed in the accumulation of capital. Assuming a consistent savings rate, climate change can decrease the investment in an economy if it negatively affects output, and vice versa if the impacts are positive. Consequently, this will result in a decline in the capital available, leading to lower GDP and, in most cases, reduced per capita consumption. In the context of endogenous growth, this effect on capital accumulation can be worsened if decreased investment also hampers technical progress, hindered improvements in labor productivity, or limits human capital development. Another effect relates to savings. In a scenario where individuals possess perfect foresight, it is expected that forward-thinking agents will adjust their savings behavior in anticipation of future climate change. This adjustment also influences capital accumulation, thereby impacting growth and future GDP. However, it is uncertain whether this savings effect will be positive or negative. On one hand, savings rates may increase as agents attempt to compensate for anticipated income losses. On the other hand, climate change reduces the productivity of capital, potentially leading agents to prefer consuming more in the present rather than investing, given the lower rate of return. Climate change has had a significant impact on people and their economic conditions throughout history, and it will continue to do so in the future. The costs of climate change result from a combination of factors, such as more extreme weather, rising sea levels and flooding, damaged ecosystems, and financial instability.

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