

# A Summary of Recent Studies Published by DIU Researchers

**13** CLIMATE  
ACTION



**Daffodil**  
*International*  
**University**

The researchers of Daffodil International University (Faculty, Students, Alumni) have conducted a number of research projects related to SDG 13 (Climate Action) and results of the projects have also been published as research papers in various international reputed peer reviewed and Scopus indexed journals. The summary of the research publications related to SDG 13 are given below:

### **1. Farmers' livelihood and adaptive capacity in the face of climate vulnerability**

[Rulia Akhtar](#) (Ungku Aziz Centre for Development Studies, Universiti Malaya, Kuala-Lumpur, Malaysia)

[Muhammad Mehedi Masud](#) (Department of Development Studies, Faculty of Business and Economics, Universiti Malaya, Kuala Lumpur, Malaysia)  
(Department of Business Administration, Daffodil International University, Dhaka, Bangladesh)

[Muhammad Khalilur Rahman](#) (Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Pengkalan Chepa, Malaysia)

[International Journal of Social Economics](#)

#### **Abstract**

#### **Purpose**

The purpose of this study is to analyze the economic, social and environmental impacts of climate change on farmers' livelihoods and adaptive capacity while highlighting specific adaptation strategies in the local climate context.

#### **Design/methodology/approach**

Data were collected using a survey questionnaire and analyzed using partial least square structural equation modeling (PLS-SEM). Respondents were selected from seven farmer organizations (Pertubuhan Peladang Kawasan) located in Kedah, Malaysia.

## **Findings**

The study revealed that farmers perceive the economic, social and environmental impacts of climate change. These adverse effects of climate change have an impact on their livelihoods as well as their adaptive capacity. The findings also demonstrated that farmers' livelihoods mediate the relationship between economic and environmental impacts of climate change as well as the adaptive capacity of farmers.

## **Originality/value**

Climate change severely affects the agricultural sector as well as farmers' livelihoods. To minimize its effect, scientists and policymakers emphasize the improvement of farmers' adaptive capacity as well as appropriate adaptation methods. However, there is little research on how climate change affects the livelihoods of farmers in the context of Malaysia. Therefore, the results of the study will provide a new perspective for policymakers to formulate a better adaptation policy framework as well as select appropriate adaptation strategies for sustainable agricultural development.

## **2. A review of the global climate change impacts, adaptation, and sustainable mitigation measures**

[Kashif Abbass](#), School of Economics and Management, Nanjing University of Science and Technology, Nanjing, 210094, People's Republic of China

[Muhammad Zeeshan Qasim](#), Jiangsu Key Laboratory of Chemical Pollution Control and Resources Reuse, School of Environmental and Biological Engineering, Nanjing University of Science and Technology, Xiaolingwei 200, Nanjing, 210094, People's Republic of China

[Huaming Song](#), School of Economics and Management, Nanjing University of Science and Technology, Nanjing, 210094, People's Republic of China

[Muntasir Murshed](#), Department of Journalism, Media and Communications, Daffodil International University, Dhaka, Bangladesh

[Haider Mahmood](#), Department of Finance, College of Business Administration, Prince Sattam Bin Abdulaziz University, 173, Alkharj, 11942, Saudi Arabia

[Ijaz Younis](#), School of Economics and Management, Nanjing University of Science and Technology, Nanjing, 210094, People's Republic of China

*[Environmental Science and Pollution Research](#)*, volume 29

## **Abstract**

Climate change is a long-lasting change in the weather arrays across tropics to poles. It is a global threat that has embarked on to put stress on various sectors. This study is aimed to conceptually engineer how climate variability is deteriorating the sustainability of diverse sectors worldwide. Specifically, the agricultural sector's vulnerability is a globally concerning scenario, as sufficient production and food supplies are threatened due to irreversible weather fluctuations. In turn, it is challenging the global feeding patterns, particularly in countries with agriculture as an integral part of their economy and total productivity. Climate change has also put the integrity and survival of many species at stake due to shifts in optimum temperature ranges, thereby accelerating biodiversity loss by progressively changing the ecosystem structures. Climate variations increase the likelihood of particular food and waterborne and vector-borne diseases, and a recent example is a coronavirus pandemic. Climate change also accelerates the enigma of antimicrobial resistance, another threat to human health due to the increasing incidence of resistant pathogenic infections. Besides, the global tourism industry is devastated as climate change impacts unfavorable tourism spots. The methodology investigates hypothetical scenarios of climate variability and attempts to describe the quality of evidence to facilitate readers' careful, critical engagement. Secondary data is used to identify sustainability issues such as environmental, social, and economic viability. To better understand the problem, gathered the information in this report from various media outlets, research agencies, policy papers, newspapers, and other sources. This review is a sectorial assessment of climate change mitigation and adaptation approaches worldwide in the aforementioned sectors and the associated economic costs. According to the findings, government involvement is necessary for the country's long-term development through strict accountability of resources and regulations implemented in the past to generate cutting-edge climate policy. Therefore, mitigating the impacts of

climate change must be of the utmost importance, and hence, this global threat requires global commitment to address its dreadful implications to ensure global sustenance.

### **3. Climate change and COVID-19: shared challenges, divergent perspectives, and proposed collaborative solutions**

[Zujaja Wahaj](#)<sup>1</sup>, [Md Mahmudul Alam](#)<sup>2, 3</sup>, [Abul Quasem Al-Amin](#)<sup>4, 5</sup>

<sup>1</sup> NUST Business School (NBS), National University of Sciences & Technology (NUST), Islamabad, Pakistan.

<sup>2</sup> School of Economics, Finance & Banking, Universiti Utara Malaysia, Kedah, Sintok, Malaysia.

<sup>3</sup> Centre for Asian Climate and Environmental Policy Studies (CACEPS), Windsor, ON, Canada.

<sup>4</sup> Department of Geography and Environmental Management, University of Waterloo, ON, Waterloo, Canada. [qalamin@uwaterloo.ca](mailto:qalamin@uwaterloo.ca).

<sup>5</sup> Department of Development Studies, Daffodil International University, Dhaka, Bangladesh. [qalamin@uwaterloo.ca](mailto:qalamin@uwaterloo.ca).

[\*Environmental Science and Pollution Research\*](#), volume 29

DOI: [10.1007/s11356-021-18402-5](https://doi.org/10.1007/s11356-021-18402-5)

#### **Abstract**

Pandemics leave their mark quickly. This is true for all pandemics, including COVID-19. Its multifarious presence has wreaked havoc on people's physical, economic, and social life since late 2019. Despite the need for social science to save lives, it is also critical to ensure future generations are protected. COVID-19 appeared as the world grappled with the epidemic of climate change. This study suggests policymakers and practitioners address climate change and COVID-19 together. This article offers a narrative review of both pandemics' impacts. Scopus and Web of Science were sought databases. The findings are reported analytically using important works of contemporary social theorists.

The analysis focuses on three interconnected themes: technology advancements have harmed vulnerable people; pandemics have macro- and micro-dimensions; and structural disparities. To conclude, we believe that collaborative effort is the key to combating COVID-19 and climate change, while understanding the lessons learnt from the industrialised world. Finally, policymakers can decrease the impact of global catastrophes by addressing many socioeconomic concerns concurrently.

**Keywords:** COVID-19; Climate change; Collaborative solutions; Impacts; Pandemic.