

SUSTAINABILITY HORIZON

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EDITORIAL

Covid-19 has been an unprecedented tragedy in the recent past. The world witnessed the outbreak of COVID-19 in December 2019, which led to the death of millions of people across the globe. Starting from China, the pandemic soon took over the entire world. We continue to experience different waves of the pandemic, although they are less severe than the initial waves. With different parts of the world being differently affected and responding in various ways, the experiences of living in the COVID-19 world provide us an opportunity to assess the issues of sustainable environment and economic growth.

Covid-19 produced a complex picture of its impact. On the one hand, it led to loss of lives and employment, particularly in the informal sector, increased medical and single use plastic waste and burdened the healthcare infrastructure, especially in the global South. This revealed the already-known facts of unequal access to resources and healthcare infrastructure, with people marginalised through gender, caste, race, and age bearing the brunt of COVID-19 effects. On the other hand, we observed a significant improvement in global air quality due to reduced land and air transport mobility (Saha et al., 2022) and reduced household food wastage (Jibri et al., 2020). Some of the effects were mixed. For instance, while some studies found a reduction in wildlife accident kills, others found that wildlife kills had increased and made wildlife monitoring difficult. Likewise, while the COVID-19 period witnessed decreased coal consumption, it also caused disruptions in global renewable energy supply chains, leading to reduced wind and solar energy production (Eroğlu, 2021). These dynamics have brought attention to the degrowth movement in producing sustainable futures (Butcher, 2023). The Degrowth movement aims to prioritise social and ecological well-being over the relentless drive for profitability, over-production and excess consumption (degrowth.info). Covid-19 allowed us to realise the value of such ideas.

These challenges are particularly relevant for business and management education as they concern issues of organising norms, tourism and its environmental impacts, green supply chains, sustainable economic growth, and business localisation. In this issue of the Sustainability horizon, we bring to the fore various facets of how COVID-19 has impacted the environmental sustainability challenges and draw important lessons from this ongoing challenge for our business and society. This issue covers the effect of lockdowns on the environment, reduction in emissions, unequal effects of covid-19, wildlife and waste generation, tourism and need for collective action. We hope that you will find this issue insightful. We look forward to your feedback and continued encouragement to produce and disseminate knowledge on issues of environmental sustainability.

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Dr. Muneeb Ul Lateef Banday Assistant Professor Goa Institute of Management

PANDEMIC PARADOX: COVID-19'S IMPACT AND OPPORTUNITIES FOR ENVIRONMENTAL SUSTAINABILITY

Our major cities today are struggling to breathe with worrisome air quality. Vehicular pollution is on the rise as we commute less through public transport. Personal vehicles give us the control and freedom to commute at our time and it is only natural to invest in resources that make our lives easier and convenient. Yet another contributor to the suspended particulate matter in the air are the industries like construction trying to meet the rapidly surging consumer demands. What can change this?

When the COVID-19 pandemic hit several countries, including India, the world had turned topsyturvy for many in 2020-21. With the real fear of sickness and death, the best health systems of the world reeled under the pressure of increased demand for emergency healthcare and



Dr. Anar Bhatt
Program Manager
Food Loss and Waste
World Resources Institute (WRI)

hospitalization. The virus was spreading faster than we anticipated forcing governments to take drastic measures to stop it. Economic activity, including industries paused, and lockdowns confined people to their homes. There was a temporary decrease in carbon emissions and pollution (1). The air was purer in an otherwise polluted cities, rivers were cleaner, wildlife were spotted in the spaces vacated by humans (2). The pandemic showed us a short glimpse of how our world would look like if we limited our unsustainable production and consumption.

For a brief period, it appeared that the pandemic might inadvertently benefit the environment. However, the positive environmental impacts were temporary and the aftermath of COVID-19 presented new and more complex challenges such as the proliferation of disposable products, especially in the healthcare sector. The increased use of masks, gloves, and gowns as well as plastic cutlery and packaging led to a massive increase in non-recyclable waste and increase in landfills (3) (4). The economic hardships triggered by the pandemic compelled many governments to assign low priority to environmental initiatives (5). Nevertheless, the temporary reduction in emissions highlighted the enormous scale of efforts necessary to make significant progress towards long-term sustainability.

Achieving sustainability is critical. The pandemic underscored both the importance and possibility of innovative thinking, resilience of communities, and a persistent commitment to change from the individual to the national level. Such adaptability, resilience, and commitment is necessary to meet sustainability goals. Many businesses have been forced to rethink their operations and pivot to more sustainable practices. For instance, remote working, initially a response to lockdowns, has now become the norm for many companies. These changes have decreased overhead costs, responds to changing worker preferences, and is also reducing emissions from daily commutes. The pandemic further underscored what humanity could achieve if it worked together for a solution. Arguably, the rapid formulation and dissemination of Covid-19 vaccine to eradicate the pandemic is an illustration of the same. This awareness of the power of collective action could potentially drive more concerted efforts towards environmental conservation and help in realizing sustainable development goals.

* The views presented are of the author only and do not reflect the opinions of WRI India and any of its staff members.

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COVID-19 PANDEMIC AND ITS IMPACTS ON ENVIRONMENT

The recent pandemic of COVID-19 has impacted human lives globally. The lock-down imposed by most of the countries is unprecedented in human history. Human gatherings were banned, travel restrictions resulted in reduced crowd, places of worship, markets were shut down, construction work was completely halted. This may have resulted into economic recession, however brought about many changes from environment perspective. This article highlights the impact of COVID-19 on the environment.



Dr. Supriya Phadnis
Assistant Professor
Goa Institute of Management

Positive Impacts on environment:

• Improved air quality: As a result of lockdowns and travel restrictions, there was a dramatic reduction in air pollution in many cities around the world. This was due to a decrease in emissions from vehicles, factories, and power plants. For example, in New Delhi, India, nitrogen oxide (NOx) emissions fell by 80% during the first lockdown.

- Reduced greenhouse gas emissions: The pandemic also led to a temporary decrease in greenhouse gas emissions, primarily due to the decline in transportation and industrial activity. In 2020, global carbon dioxide (CO2) emissions fell by 2.4%, the largest annual drop on record.
- Improved water quality: In some areas, there was also an improvement in water quality due to reduced industrial and agricultural pollution. For example, in Venice, Italy, the canals became clearer as boat traffic decreased.
- Increased wildlife sightings: With fewer people around, there were more sightings of wild animals in urban areas and near tourist destinations. For example, deer were seen roaming the streets of San Francisco, and monkeys were observed playing in the ruins of Angkor Wat.

Negative Impacts

- Increased medical waste: The pandemic generated a massive amount of medical waste, including personal protective equipment (PPE), disposable gloves, and testing kits. This waste posed a risk of environmental contamination if not properly managed.
- Increased plastic waste: The use of disposable plastics, such as takeout containers and single-use utensils, surged during the pandemic due to concerns about hygiene and food safety. This led to an increase in plastic pollution in oceans, landfills, and waterways.
- Deforestation: The economic downturn caused by the pandemic led to an increase in deforestation in some regions, as people turned to logging and clearing land for agriculture to make ends meet.
- Delayed environmental initiatives: The pandemic also caused delays in the implementation of environmental initiatives, such as renewable energy projects and conservation programs.

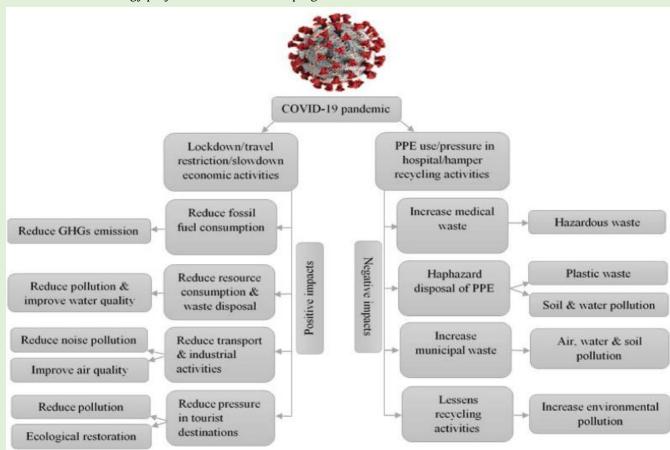


Figure 1: Positive and negative environmental effects of COVID-19 pandemic *Source: Rume, T., & Islam, S. M. D. (2020).*

Environmental sustainability is needed to ensure the long-term health of our planet and its inhabitants. Our current patterns of resource consumption and pollution are unsustainable, and if we continue on this path, we will face a number of serious environmental problems. In context with the COVID-19 pandemic, it has had a mixed impact on the environment. While there were some positive short-term benefits, such as improved air and water quality, there were also some negative consequences, such as increased medical waste and plastic pollution. It is important to learn from the pandemic and take steps to ensure that environmental protection remains a priority in the years to come.

IMPROVING BRAND'S IMAGE: A CRITICAL LEARNING POST COVID

Sustainability forms the core principle for companies today. Many firms, products and brands have been focusing on adhering to sustainability practices into their offerings. For instance, green products. This has been the essence of marketing these products though sustainable channels, generate better engagement and emphasizing on consumer's interactions on online channels. They adapt more sustainable procedures for promoting brands online. Of these uncertain situations COVID has embedded more challenges to the brands. As brands attempt to bring more resilience into their online promotions; for instance, reflecting upon comments on several social media channels help brands grow and nurture. Under these situations despite mixed and conflicting reviews on social media avenues brands try to be sustainable and more



Dr. Purvendu Sharma
Assistant Professor
Goa Institute of Management

resilient even during the challenging times. Alternatively, the brands can also think of is engaging more sustainable influencers. It can offer two-fold avenues. First it can employ more influencers attached to brands that can build strength during crises. Secondly, brands can become more resilient and improve their image on these avenues. Therefore, it is highly recommended that managers can aptly articulate their social media strategies to frame better brands, improve their image and by being more resilient. Second takeaway aligns with engagement of influencers in building a sustainable brand. It is assumed that in the challenging times of crisis and uncertainties such as COVID, brands are likely to nurture by exhibition of better responses to the challenging times.

IMPLICATIONS OF THE LOCKDOWN ON THE ENVIRONMENT

Coronavirus disease (COVID-19) represents a contagious illness triggered by the SARS-CoV-2 virus and is recognized as a significant worldwide challenge, comparable to the challenges faced post-1945 (the conclusion of World War II). Its initial identification occurred in late December 2019 in Wuhan, People's Republic of China. Over the subsequent three months, the virus propagated extensively worldwide, leading to severe health complications and fatalities, particularly among older individuals and those with pre-existing medical conditions such as chronic respiratory disease, cardiovascular disease, diabetes, or cancer. With a rapid surge in the number of affected individuals and escalating death tolls, the Director-General of the World Health Organization (WHO) officially declared COVID-19 a pandemic on March 11, 2020.



Ms. Krisha Pereira
E.A. to the Director
Goa Institute of Management

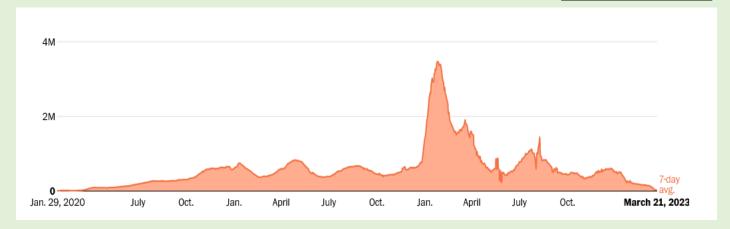


Fig 1: New daily reported cases across the world Source: https://www.washingtonpost.com/graphics/2020/world/mapping-spread-new-coronavirus/

Globally, nations implemented lockdown measures that included the suspension of both domestic and international flights, alongside encouraging citizens to remain indoors, aiming to mitigate the spread of COVID-19 and flatten the curve. Despite the adverse economic consequences of the lockdown, including heightened unemployment, increased poverty and recession, and elevated debt levels, the restrictions on local and international mobility produced beneficial effects on various environmental indicators. These positive impacts encompassed enhancements in air and water quality, reductions in air and noise pollution, diminished harm to flora and fauna, and a decrease in land surface temperatures.

Nonetheless, the adverse consequences of the lockdown cannot be overlooked, particularly in terms of heightened waste generation and increased usage of plastics. This surge in waste production was attributed to the surge in home food deliveries, heightened reliance on hand sanitizers, and increased consumption of packaged drinking water. Furthermore, the escalated prices of renewable energy sources, such as natural gas, during this period prompted a resurgence in coal and nuclear power production, exerting detrimental effects on the environment and intensifying the demand for electricity. In addition to the lockdown's impact, the treatment of afflicted individuals and vaccination efforts resulted in a substantial generation of medical and biohazardous waste, further straining already overloaded waste disposal facilities and landfills.

It is imperative to note that that the current data available is insufficient for a comprehensive evaluation of the prolonged ecological and environmental consequences of COVID-19. Preliminary observations and analyses indicate that the positive effects, such as enhancements in environmental quality indicators, were transient and coincided with the duration of lockdown enforcement. These positive outcomes can be considered somewhat superficial advantages. In contrast, the negative repercussions have exhibited a more enduring influence, with numerous countries still grappling with challenges in waste management and enduring elevated prices for renewable energy, attributable to the enduring aftermath of COVID-19.

The global experience with COVID-19 has underscored the interconnectedness of public health, economic stability, and environmental well-being. As we navigate the aftermath of this pandemic, it is imperative for governmental bodies, international agencies, and the scientific and research community to expedite collective initiatives promptly. These efforts should focus on

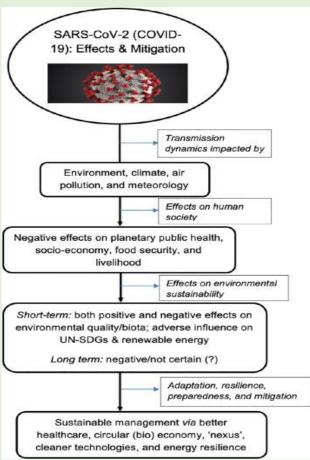


Fig 2: Transmission dynamics of COVID-19 and multiple effects on the environment

Source: The effects of COVID-19 transmission on environmental sustainability and human health: Paving the way to ensure its sustainable management by Prabhat Kumar Rai et al

evaluating the enduring impacts of COVID-19 on Sustainable Development Goals (SDGs), energy resilience, climate action, and environmental sustainability, because, only through concerted efforts can we build a more resilient and sustainable future that safeguards the well-being of both humanity and the planet.

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IMPACT OF COVID-19 AFTERMATH ON ENVIRONMENTAL SUSTAINABILITY

The COVID-19 pandemic has had an effect on the environment, causing transitory changes in air pollution, greenhouse gas emissions, and water quality due to shifts in human activities. Early in 2020, as the epidemic became a worldwide health crisis, different country reactions, such as lockdowns and travel bans, significantly disrupted society, travel, energy use, and economic activity. This period is commonly referred to as the "anthropause."

Global carbon dioxide emissions decreased in 2020 by 6.4%, or 2.3 billion tonnes. NOx emissions decreased by up to 30% in April 2020. Investment in green energy technology may have halted as a result of environmental legislative obstacles and the global economic downturn.



Ms. Sunita Hadjunkar Academic Associate Goa Institute of Management

Environmental pressures have significantly decreased in the short term: emissions linked to energy have decreased by 7%, while emissions related to agriculture have decreased by less (about 2%). The use of non-metallic minerals, especially for construction materials, has dropped by double digits. If global environmental concerns like climate change and biodiversity loss are not addressed, the social and economic costs could be far higher than those caused by COVID-19.

Environmental scientists have shown that the environment has significantly improved since human activities and travel have decreased. A river water quality (RWQ) metadata study revealed that the urban-industrial region of Damodar's waterways have increased in quality. This increase in water quality was caused by a decrease in pollutants. In terms of water quality, the Ganga saw substantial improvements. The recovery process offers a crucial opportunity to bring about the revolutionary change that is required to create a sustainable society.

With this in mind, the management of medical waste, mitigating the negative effects of air pollution, and embracing sustainable workstyles and lifestyles are all believed to be significant from an environmental standpoint. Moving forward, it will be crucial that each nation's extensive economic initiatives support the creation of a society that is more resilient and sustainable.

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IMPACT OF COVID-19 AFTERMATH ON ENVIRONMENTAL SUSTAINABILITY

The 2019 Coronavirus Disease Pandemic's health hazards are closely intertwined with the environment, climate, air pollution, and meteorological conditions. So, through having an impact on the geographic and temporal variations of environmental pollutants, COVID-19 infection has the potential to disturb the earth's well-being and way of life.

Every aspect of human existence, including the physical environment, has been impacted by the COVID-19 epidemic. Both positive and negative effects on the environment were significant. On the plus side, the pandemic forced people to stay indoors, which reduced or rather prevented the overuse of fossil fuels (in vehicles, machinery, and other devices), hence lowering air and water pollution. A large number of industries, including manufacturing and tourism, were also shut down,



Milanshree Mall HCM 2022-24

which further contributed to a decrease in pollution. People in India's poor AQI regions claimed to have better visibility, the coral reefs had started to rebuild, and the level of noise pollution in populated areas had also decreased significantly.

On the downside, the pandemic increased the need for PPE kits and other necessary, non-reusable medical supplies, equipment, and devices. This increased the amount of waste produced, which has a negative externality because it has an impact on the quality of the soil, water, and air after it is disposed of. Furthermore, COVID-19 has hindered efforts to address urgent threats to natural resources, which has harmed livelihoods, agriculture, forestry, and agro-forestry, as well as on food security, nutrition, education, and international peace (SDGs 2030).

Although the positive externalities eventually reversed, they opened the door for more study on the circular economy, environmental sustainability, and healthcare. A holistic examination of COVID-19's effects on many sectors should be used to assist maintain environmental sustainability, ecosystem resilience, and planetary health, produce nature-based remedies, cleaner technology, and green economic recovery plans.

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IMPACT OF COVID-19 AFTERMATH ON ENVIRONMENTAL SUSTAINABILITY

Covid in many ways has brought to the forefront the environmental issues and the need for sustainability. Before the Pandemic there was a reckless exploitation of natural resources. The concept of environmentalism was merely paid a lip service. The rich and the powerful developed countries who were responsible for the exploitation of nature thought themselves immune from its wrath. The brunt of their actions was borne by developing nations like Kiribati and Tuvalu whose existence in on the Brink of extinction.



Harshda Gholve PGDM 2022-24

But the Covid pandemic to some extent has created an equality of Suffering. Irrespective of your economic and social status, your geography, to some extent, everybody had the potential to be affected by it and no one was immune to it. People were forced to confront the consequences of their actions. As Research shows that due to increasing Pollution and climate change, there is a higher risk of the Emergence and spread of Such Zootonic diseases. The loss of Habitat and Biodiversity creates conditions for lethal new viruses and diseases to spill into Human communities. Hence today we see a sense of urgency among the global leaders regarding Environmentalism. Sustainability is the new buzzword in corporate circles with every company trying to incorporate it in one way or another.

But this cannot just be like another trend, and as time passes to revert to business as usual – sacrificing the health of the planet for profit. It is time to abandon this destructive system and find sustainable ways to inhabit our planet

IMPACT OF COVID-19 AFTERMATH ON ENVIRONMENTAL SUSTAINABILITY

Covid-19 is one of the worst pandemic the world has witnessed affecting millions of people around the world. Although it has claimed the lives of many, it has also played a crucial part in changing the dynamics of the environment as well. Covid-19 has brought about many positive effects on the environment; few of which are mentioned in the article.

Covid-19 has had positive impacts on wildlife across the world. Wildlife has had a chance to flourish since fewer people are travelling and there is less human activity in natural places. Aquatic life as well benefitted greatly from clean rivers and other bodies of water. The level of pollution has decreased globally as a result of the closure of factories and businesses. Even the sea life seemed to be

Nishanta Das PGDM 2022-24

enjoying this respite from the noise and water pollution. Many species are returning to their natural habitats and because of the drop-in human activity, sea turtles have increased the number of eggs laid on Thai beaches.

The pandemic has also encouraged the use of sustainable modes of transportation. With people avoiding public transportation, there has been an increase in cycling and walking. This has led to a decrease in carbon emissions from transportation which has played a major role in reduction of carbon emissions. Much less carbon emissions have been produced overall, particularly in the transportation and aviation industries, as a result of the lockdown procedures and decreased economic activity. The move to renewable energy sources has been expedited by the pandemic. Compared to the fossil fuel sector, the renewable energy sector has been less impacted by the pandemic. As a result, numerous nations are increasing their investments in wind and solar energy, making renewable energy more competitive with fossil fuels.

Covid-19 has shown us a path to achieve the goals which are mostly imagined to be impossible in the current world. With determination and practices of sustainable practices, we can bring about the much-needed change in the environment.

IMPACT OF COVID-19 ON ENVIRONMENTAL SUSTAINIBILTY

"The COVID-19 pandemic has shown us that human health and the health of the planet are inextricably linked." - Amina Mohammed, Deputy Secretary-General of the United Nations.

Human health and health of the planet are the two aspects that the nature has forced us to focus on. Concrete jungles were left stranded when a virus from a natural being shook the entire humanity to introspect. Introspect the delicacy of nature that we need to protect or face the mammoth of epidemics and pandemics that lie in front of us.



Siddharth Gopal BIFS 2022-24

The pandemic on a positive side led to a reduction in carbon emission levels and air pollution levels due to reduced economic. For example, China's coal consumption in 2020 was drastically lower than in previous years, particularly during its lockdown period, when consumption dropped below 40 thousand tonnes.

On the downside, the pandemic has increased plastic trash production because PPE like masks, gloves, and gowns have been used so frequently. In especially in oceans and rivers, improper disposal of these items has increased littering and pollution.

Ultimately, the pandemic has brought attention to how closely human actions and the environment are related. The restrictions in social and economic movement have resulted in a reduction to transportation and commerce, contributing significantly to a decrease in greenhouse gas emissions. Simultaneously, ecological hotspots, where human activity is usually rife, have enjoyed an improved environmental quality, enabling wildlife and other lifeforms to thrive efficiently. To stop additional environmental harm, the pandemic has also brought attention to the need for better waste management and sustainable methods.

ABOUT THE CENTRE

GIM has always been conscious about the impact of its decisions on the ecosystem around it and has continuously strived to reduce its carbon footprint. Along with measures like rainwater harvesting, solarpowered street lamps, treatment of water for reuse, tree plantation drives and many more, the institute has expressed its commitment to this philosophy also through its mission statement which talks about sustainable business and an inclusive society for India and the world. In line with this commitment, the Centre for Excellence in Sustainable Development was officially formed in July 2018 to contribute to GIM's quest for sustainability. The Centre started working with three core objectives in mind:

1. KNOWLEDGE CREATION

- To develop a model institute for green campus in India and transform GIM community into a more sustainable community. At the same time, use these processes for action research in the field of sustainable development.
- To help develop knowledge through research in the aforesaid fields.

2. KNOWLEDGE DISSEMINATION

- To increase awareness about green living and sustainable development in the community
- To carry out activities to try to reduce the carbon footprint of the state of Goa and India as a whole.

3. KNOWLEDGE APPLICATION

- To develop a resource Centre for sustainable development at GIM for imparting training, providing consultancy and participating in policy making.
- To contribute to the development of start-ups and ventures for sustainable development at the grassroots level.

Over the next few years, Centre plans to contribute towards the following five sustainable development goals adopted by United Nations member states in 2015:











CESD believes that every graduate of GIM should be a sustainability ambassador and every employee should be a part of GIM's journey towards environmental sustainability.

Some of the current projects and activities of the Centre include:

- Development of a Sustainability Report for GIM
- Development of a Biodiversity Register of the GIM Campus
- Formation of the CESD Advisory Board
- Celebrated World Environment Day by organising a Sustainability Walk through GIM campus and an interactive session
- Organising Faculty Development programmes on 'Incorporating' Sustainability in Course Curriculum'





DR. KAREN FERNANDES

Contact No: 0832-2366 924

Email: karen@gim.ac.in

MEET THE CESD TEAM

PROF. ARPITA AMARNANI **CHAIR**

Email: arpita@gim.ac.in Contact No: 0832-2366 755

MEMBERS

PROF. VITHAL S. SUKHATHANKAR

Email: visukh@gim.ac.in Contact No: 0832-2366 724

PROF. MAULI SONI Email: mauli@gim.ac.in Contact No: 0832-2366 731

PROF. MUNEEB UL LATEEF BANDAY

Email: muneeb@gim.ac.in Contact No: 0832-2366 742 PROF. DIYA GUHA ROY

Email: diya.roy@gim.ac.in Contact No: 0832-2366 757

PROF. SUBHAMITRA PATRA Email: subhamitra@gim.ac.in Contact No: 0832-2366 731

Email: abhinav@gim.ac.in Contact No: 0832-2366 746

PROF. ABHINAV SHARMA

For Newsletter or Centre related queries, please write to us at sustainability@gim.ac.in



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