

COLUMBIA GLOBAL CENTERS | MUMBAI



ANNUAL REPORT 2020 -2021

COLUMBIA GLOBAL CENTERS | MUMBAI





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Global collaboration is a core element
of Columbia University's mission



Our network of Global Centers has become central to the University's teaching, research, and scholarship. The Centers afford students and faculty the opportunity to engage with the people and ideas shaping the modern world, at a moment when that need could not be more urgent. And when they return to our home campuses, those who have travelled abroad play an essential role in broadening the intellectual outlook of all of us. It is simply a fact that we would not be the same institution without the Global Centers.

– **LEE C. BOLLINGER**, President of
Columbia University

At a time when so many turned inward and the world became insular, we [the Global Centers] went out—even more—and we adapted, innovated, and built a community. We were not isolated groups serving specific locations, but a global body functioning together for all. Our defining purpose—of being an essential, international part of the University—has never been more clearly realized. This year, 2021, is one of consolidation for our network, as we strive to continuously grow and strengthen the international presence essential to the University and the global community.

– **SAFWAN M. MASRI**, Executive Vice
President for Global Centers and Global
Development at Columbia University



A NEW DECADE BEGINS

Like trees that sustain numerous living beings, Columbia Global Centers | Mumbai has functioned for over ten years as a vibrant platform where forms of knowledge and learning exist and thrive!

We enter our second decade amidst new strains of the devastating coronavirus pandemic. Yet, there is a growing awareness worldwide of assessing the consequences of human action and rethinking future decisions. Globally, and in India, commitments have been made to ecological restoration and to carbon reduction. The decade has opened with a spurt of entrepreneurship too, reflected in the number of successful startups in the country, with the promise of more to come. Furthermore, an unprecedented number of Indian students are enrolling into schools and in higher education institutions.

Programs at the Mumbai Center in this past year, all virtual, have been at the cutting-edge of addressing these developments in environment, health, education, culture, and business. Seeded in 2010, our fledgling center has grown in size and scope this past decade. Since its inception, we have hosted over 350 programs, including faculty research projects, public events, and student initiatives. We have engaged with the most renowned and diverse experts and organizations in the region and across our network of global centers to advance education and research, promote exchange, and build collaboration.

Even the mightiest of trees needs a favorable climate and nutrients to stand tall. We are privileged to have the support of our wonderful Advisory Board members, faculty, alumni, students, and regional community. All of you have helped us bloom, and we are grateful!



RAVINA AGGARWAL

Director, Columbia Global Centers | Mumbai

ABOUT THE CENTER

Established in India in 2010, Columbia Global Centers I Mumbai is one of nine global centers of Columbia University. By serving as a regional hub and knowledge platform, we aim to:

- Enable, inform, and disseminate the highest levels of research
- Produce 21st century citizens by advancing education and learning for students and professionals
- Design innovative projects that apply academic knowledge to address pressing global challenges
- Build a global network by connecting the University's world-class scholars with peers from our region

The following pages of this report, spanning from September 2020 to September 2021, provide an overview of our programs and of the people who helped shape them.



PROGRAMS



Son Rise’ Documentary Screening and Panel Discussion
October 5, 2020 | Panel Discussion

Screening for Breast Cancer during COVID-19
October 6, 2020 | Panel Discussion
Co-organizer: Herbert Irving Comprehensive Cancer Center

Regional Columbia Community Programs Alumni Series: A Dialogue with Jasmine Shah
October 15, 2020 | Education

The Khemka Distinguished Speakers Forum Presents: A Conversation with Ratan Tata
October 16, 2020 | Panel Discussion
Co-organizer: Columbia Business School

Clean Skies Over Our Cities: Lessons from the Covid-19 Lockdown
October 20, 2020 | Panel Discussion
Co-organizers: Columbia Global Centers | Nairobi; Columbia Global Centers | Beijing; Mailman School of Public Health

Tapped Out: Water Scarcity and Governance in Mumbai
October 29, 2020 | Panel Discussion
Co-organizer: Graduate School of Arts and Sciences

Breaking Binaries: Thinking about Art in the Covid Age
November 13, 2020 | Panel Discussion

Screenings That Save: Detecting Stomach and Pancreatic Cancers
November 30, 2020 | Panel Discussion
Co-organizers: Herbert Irving Comprehensive Cancer Center; Mailman School of Public Health

Bombay Hustle: Making Movies in a Colonial City
December 3, 2020 | Panel Discussion

An Astronaut’s View of Planet Earth: Why Innovation Matters
December 8, 2020 | Panel Discussion
Co-organizer: Fu Foundation School of Engineering
Project: Urban Works Innovation Challenge

SPS India Virtual Career and Networking Fair
January 28, 2021 | On-campus
Co-organizers: Career Design Lab and School of Professional Studies

Urban Works: Mike Massimino on Team Building
January 29, 2021 | Seminar
Co-organizer: Fu Foundation School of Engineering
Project: Urban Works Innovation Challenge

Responsible Innovation
February 4, 2021 | Panel Discussion
Project: Urban Works Innovation Challenge

India in the New World Order
February 5-6, 2021 | Conference
Co-organizers: Columbia Business School; South Asia Business Association

The Great Vaccine Race: Perspectives from India and the World
February 8, 2021 | Panel Discussion
Co-organizer: Mailman School of Public Health

Challenges to the Continuum of Dementia Care
February 18, 2021 | Seminar
Co-organizers: Mailman School of Public Health; The Robert N. Butler Columbia Aging Center

Environmental, Host & Lifestyle Factors for Cancer Risk in India: An Overview of Epidemiological Studies at the Public Health Foundation of India
February 19, 2021 | Seminar
Co-organizer: Mailman School of Public Health

Information session - IIIT Delhi
February 24, 2021 | Information Session
Project: Urban Works Innovation Challenge

Innovations for the Pandemic
March 4, 2021 | Panel Discussion
Co-organizer: Confederation of Indian Industry
Project: Urban Works Innovation Challenge

Women in Power: Perspectives from the Energy Sector
March 8, 2021 | Panel Discussion
Co-organizers: Columbia SIPA; Center on Global Energy Policy; Columbia Global Centers | Beijing

Global Seminar Series I: Energy and Climate Challenge in Emerging Asia
March 18, 2021 | Seminar
Co-organizers: Columbia SIPA; Center on Global Energy Policy; Columbia Global Centers | Beijing

Screenings That Save: Controlling Cervical Cancer
March 23, 2021 | Panel Discussion
Co-organizer: Mailman School of Public Health

The Digital Turn in Education: Challenges and Opportunities in the Wake of COVID-19 Session 1
March 26, 2021 | Symposium / Seminar (Public)
Co-organizer: Teachers College

The Digital Turn in Education: Challenges and Opportunities in the Wake of COVID-19 Session 2
March 26, 2021 | Symposium / Seminar (Public)
Co-organizer: Teachers College

Urban Works Final Round | US Track
April 13, 2021 | Workshop
Co-organizer: Fu Foundation School of Engineering
Project: Urban Works Innovation Challenge

Urban Works Final Round | India Track
April 16, 2021 | Workshop
Project: Urban Works Innovation Challenge

Re-Wilding India: Role of the Private Sector in Biodiversity Conservation
April 20, 2021 | Panel Discussion
Co-organizer: Confederation of Indian Industry

Urban Works | Bootcamp for the US Teams
April 26-27 and May 5-12, 2021 | Seminar
Co-organizer: Fu Foundation School of Engineering
Project: Urban Works Innovation Challenge

Screenings That Save: Raising Oral Cancer Awareness
April 28, 2021 | Panel Discussion
Co-organizers: Herbert Irving Comprehensive Cancer Center; New York Presbyterian Hospital; Irving Medical Center

Global Seminar Series II: Energy and Climate Change Policies in India
April 28, 2021 | Seminar
Co-organizers: Columbia SIPA; Center on Global Energy Policy; Columbia Global Centers | Beijing

Pride and the Pandemic: Revisiting Marriage in India
June 10, 2021 | Panel Discussion

Screenings That Save: Preventing Liver Cancer
June 22, 2021 | Panel Discussion
Co-organizers: Columbia University Irving Medical Center; Mailman School of Public Health

Global Seminar Series III: The Climate for Renewables: A conversation on India’s Energy Policy
June 24, 2021 | Seminar
Co-organizers: Columbia SIPA; Center on Global Energy Policy; Columbia Global Centers | Beijing

Vaccines and Variants: The Local and Global in Covid Research
July 28, 2021 | Panel Discussion
Co-organizer: Columbia University Irving Medical Center

Urban Works | Teamwork and Leadership Seminar
July 8, 2021 | Seminar
Co-organizer: Fu Foundation School of Engineering
Project: Urban Works Innovation Challenge

Urban Works: Bootcamp for the India Teams
July 15, 16, 22, 28 and August 4, 2021 | Seminar
Co-organizer: Fu Foundation School of Engineering
Project: Urban Works Innovation Challenge

Urban Works: Seminar on OKRs
August 12, 2021 | Seminar
Project: Urban Works Innovation Challenge

Urban Works: Seminar on Financial Modeling and ESOPs
August 25, 2021 | Seminar
Project: Urban Works Innovation Challenge

Urban Works: Seminar on Hiring
September 1, 2021 | Seminar
Project: Urban Works Innovation Challenge

Screenings That Save: Preventing Blood Cancer
September 15, 2021 | Panel Discussion
Co-organizers: Hebert Irving Comprehensive Cancer Center; Columbia University Irving Medical Center

Poetry of Crises and Loss: A Conversation with Sudeep Sen
September 23, 2021 | Panel Discussion

KEY FIGURES

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PROGRAMS & TYPES

Information Sessions & Student Programs	12
Panel Discussions	19
Public Lectures	2
Seminars	34
Workshops	2

PUBLIC ENGAGEMENT

Program Participants	3901
Subscribers	12394

TYPES OF ORGANIZATIONS

Academia	313
Civil Society Organizations	142
Government Agencies	42
Private Sector Organizations	185
Media	22
Professional Organizations	100

ATTENDEES

Faculty	92	Students	370
Administrative Heads	110	Alumni	143

UNIVERSITY PARTNERS

Barnard College	School of General Studies
College of Dental Medicine	School of International and Public Affairs
Columbia Business School	School of Law
Columbia College	School of Nursing
Columbia Law School	School of Professional Studies
Columbia School of Journalism	School of Social Work
Fu Foundation School of Engineering and Applied Sciences	School of the Arts
Graduate School of Architecture, Planning and Preservation	SIPA Center on Global Energy Policy
Graduate School of Arts and Sciences	Teachers College
Mailman School of Public Health	The Climate School
	Vagelos College of Physicians and Surgeons

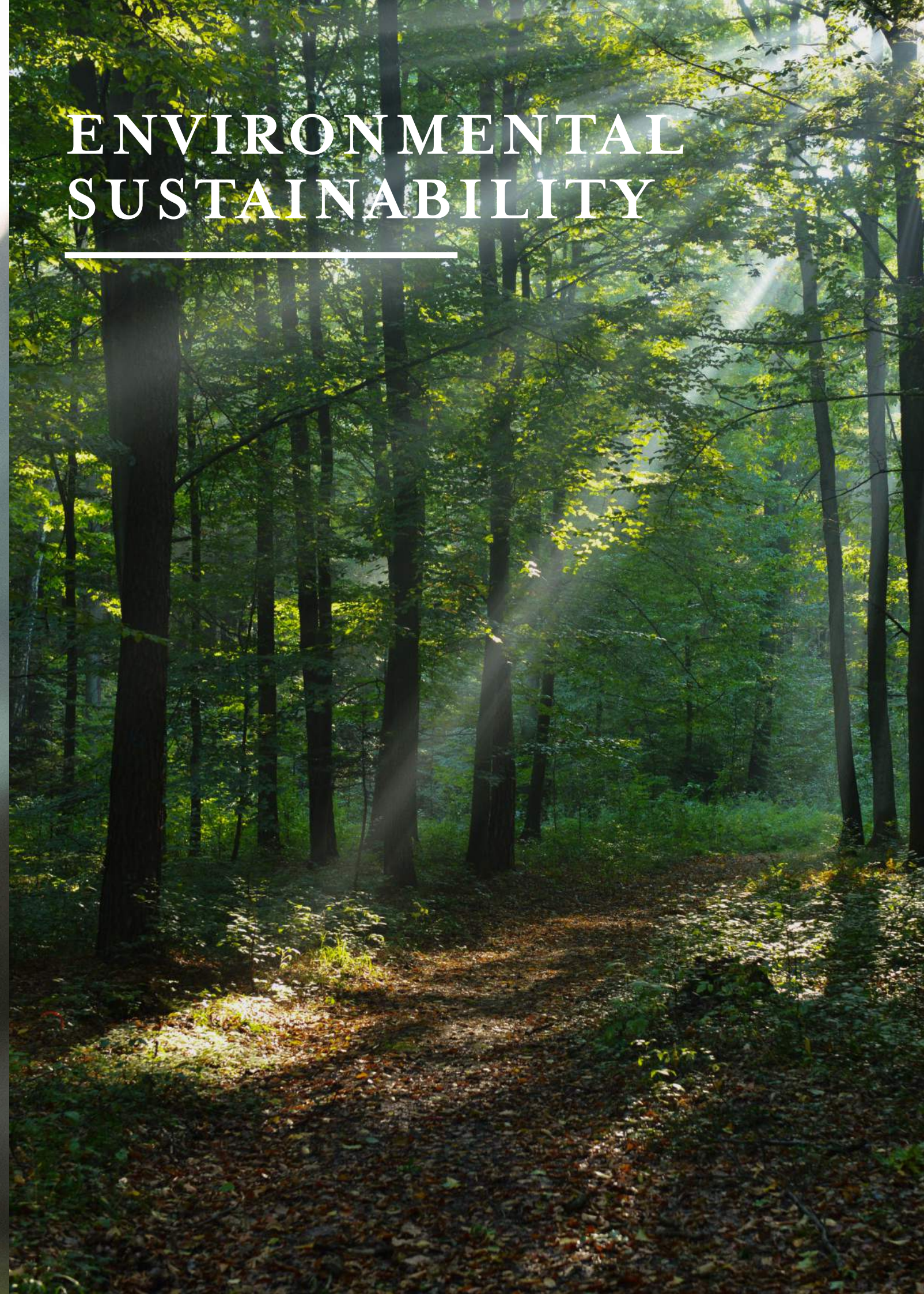
OTHER CENTERS & INSTITUTES

Center for Career Education	International Center for Aids Care and Treatment Program (ICAP)
Center for Undergraduate Global Engagement	Lamont-Doherty Earth Observatory
Chazen Institute for Global Business	NIEHS Center for Environmental Health in Northern Manhattan
Herbert Irving Comprehensive Cancer Center	South Asia Institute
Irving Medical Center	The Earth Institute

PROGRAMS IN FOCUS



ENVIRONMENTAL SUSTAINABILITY



The Decade of Renewable Energy

As the world's third largest energy-consuming country, India has pledged that by the end of this decade, it will use renewable energy to meet half its energy needs and reduce the carbon intensity of its economy to less than 45 percent. The country's energy use, while less than half the world average per capita, has doubled in the 21st century, with 80% of demand still being met by coal, oil, and solid biomass. India is striving to ensure energy for all its citizens and yet simultaneously account for climate change threats and explore clean energy avenues at a rapid pace.

Columbia Global Centers I Mumbai has launched a new initiative on sustainable energy in India, in partnership with centers and schools at Columbia University, especially the Center for Global Energy Policy (CGEP) at the School of International and Public Affairs (SIPA) with the aim of disseminating information and research, promoting dialogue, and encouraging transformative solutions.



"The Center on Global Energy Policy is partnering with Columbia Global Centers I Mumbai to develop a number of projects, interventions, and activities that will further the understanding and support for India's transition towards a more inclusive and sustainable energy system."

– LAURIE FITZMAURICE, Executive Director, Center for Global Energy Policy, Columbia University

POLICY SOLUTIONS



CGCM collaborated with Columbia Global Centers I Beijing and CGEP for a four-part series entitled *Climate and Energy Policy in Asia* to bring expert findings and perspectives from the region to a public forum. The third session of the series, held in June 2021, focused on India, and featured a conversation with Mr. Sumant Sinha, Chair and Managing Director of ReNew Power and an alumnus of SIPA. Mr. Sinha presented from his recent book, *Fossil Free: Reimagining Clean Energy in a Carbon-Constrained World*, sharing multiple policy approaches for India's move towards carbon lightness and energy sufficiency by scaling up investment, promoting green jobs, supporting innovation in electricity storage solutions, accelerating demand through dynamic pricing, and adopting a forward-looking approach in general.

REDUCING EMISSIONS



As India recovered from a Covid-induced slump of 2020, it re-entered a very dynamic period in its energy consumption and associated pollution levels. In order to understand the current status and future trends of air pollution and emissions from a comparative urban perspective, CGCM, in partnership with the Global Centers in Beijing and Nairobi organized a webinar, *Clean Skies Over Our Cities*, in October 2020. The webinar, featuring Columbia University scientists working in India, China, and Africa-V. Faye McNeill, Professor of Chemical Engineering; Arlene M. Fiore, Professor of Earth and Environmental Sciences, and Daniel Westervelt, Associate Research Scientist at the Lamont-Doherty Earth Observatory, underscored the importance of scientific research and monitoring, awareness-building, and engaging governments.

GENDER EQUITY



A sunrise industry such as renewable energy can address the gender gap that exists in the energy sector through training and work opportunities. These views were expressed at a program organized by CGCM and CGEP on the occasion of International Women's Day on March 8, 2021. The program included an online screening of the award-winning documentary film, *Powerless*, co-produced by SIPA alumna, Deepti Kakkar. In the discussion that followed, speaker Vaishali Sinha, a co-founder of ReNew Power Ltd, remarked, "If we look at the energy sector, in rural and urban India, women are at the core of solutions. Public-private partnership models should come forward to support women ventures and to engage women even in leadership positions. In ReNew, we are serious in engaging women, not just within ReNew Power but outside as well."

The Decade of Ecosystem Restoration:

Interview with

PROFESSOR RUTH DEFRIES



Ruth DeFries is University Professor, Denning Family Professor of Sustainable Development at Columbia University, and Co-founding Dean of the Columbia Climate School. Excerpts from her interview with the Mumbai Center are presented here.

This being the 'UN Decade for Ecosystem Restoration,' what opportunity do you see for India, and what are some of the priorities that India must commit to?

RDF: The decade of ecosystem restoration is a great opportunity for India. The traditional way of thinking about ecosystem restoration is to bring forests back. But there is a lot of thinking to do about what really is the paradigm of restoration for a country like India. There has been a long-time national goal of 33% forest cover that comes from European forestry ideas. Of course, we all know that forests are important, but the idea of restoration, which has traditionally been about planting trees and particularly about planting non-native species, needs to be rethought and reviewed. For instance, watersheds play an equally critical role in recharging groundwater and supporting freshwater bodies, so I think watershed protection and restoration is an important area to work on. This UN Decade of Ecosystem Restoration gives us an opportunity to

think hard about what restoration really means.

In recent years, India has made bold commitments towards net-zero emissions. Do you see similar action to conserve ecosystems and biodiversity?

RDF: In India, there is a long and deep appreciation for biodiversity and cultures built on biodiversity. There are multiple schemes and missions which relate to biodiversity– the National Mission on Biodiversity and Human Well-Being, Green India Mission, and National Mission for Clean Ganga. There are lots of watershed schemes, forest and biodiversity acts, as well as wildlife protection that goes back to the 1970s where India has a lot to be proud of in terms of its wildlife protection. The area to improve upon is implementation on the ground– on how to take those schemes and policies to the ground level. That is an enormous, enormous challenge given the need for development, the human pressures, and the scarcity of land.

Can you tell us more about your own research that brings this kind of people-centric perspective to issues of climate and biodiversity?

RDF: My research in India started with a conservation perspective. But the more I got

involved in research and fieldwork on the ground– it didn't take long to realize that you really can't think about conservation or nature without thinking about how much people depend on their local ecosystem for their fuel-wood and energy sources, for food, and for livelihoods. The local ecosystem, the wellbeing of people, and conservation are so intertwined. I find that so inspiring but an enormous challenge. One of the topics that I've worked on with a wonderful group of colleagues is on cereals in India. There are so many benefits to putting greater priority on traditional cereals, which have been there for long but their production has reduced at the expense of rice and wheat that came during the Green Revolution. For people, it is much more logical to think about these traditional and very nutritious cereals, both from climate resilience as well as the water demand perspective.



Congratulations on your recent book, 'What Would Nature Do?'. What is its main argument?

RDF: I was just finishing it right when the pandemic started. What motivated me to write about this topic was realizing how important extreme events, shocks, and surprises are to the course of civilization. Nature is a complex system that has withstood shocks for millions and millions of years, whether they're asteroids, extinctions, or diseases. So, there must be something to learn there. That was the question that I was trying to ask myself with this book, what is it about the way nature and ecosystems

are structured and organized that might be in some way relevant to human societies. The book is organized around four characteristics of nature and ecosystems– diversity, redundancy and networks, bottom-up organization and the ability for those who are closest to the ground to be able to make decisions for themselves, and self-regulating mechanisms. These are four important features that are very characteristic of nature and we can take from that for thinking about how civilization can move forward.

You've been instrumental in setting up the Columbia Climate School. Do you recommend Indian universities build similar departments?

RDF: I'd be reluctant to say what anyone should do about their institutions, but I do think that this approach of having a school that addresses a complex problem in a society is a very different approach than having only chemistry, biology, economics– traditional disciplines. One of the very exciting things about the climate school is to be able to have interdisciplinary collaboration and focus on solving problems.

Do you think India can feature as a site where Columbia students get a first-hand understanding of climate and biodiversity issues?

RDF: I think the best experiences for students and the most impactful learning comes not from being in the classroom, but from being out in the world and just experiencing and seeing what the real world is and what people are dealing with. India is such a great place to have such an experience because all these important issues around ecosystems, people, and climate are so well intertwined here.

As the Chair of CGCM's Faculty Advisory Committee, could you comment on the Center's significance?

RDF: It's been such an honor to be able to be part of Columbia's global center in Mumbai. It is a very important platform for intellectual exchange, an information broker for bringing people together, and a place for Columbia faculty and students to learn from the community in India.



BUSINESS AND ECONOMIC OPPORTUNITY

Innovating for the Pandemic

The COVID-19 pandemic has affected lives and altered the nature of businesses globally. In India, large-scale lockdowns caused a reduction in social mobility and economic activity also dropped as a result. Faced with health system shortages and overstretched manpower, and citizens coping with unprecedented loss and distress, the Indian entrepreneurship sector witnessed a spurt of innovation, especially in the domains of safety, hygiene, treatment, and diagnostics.



This year, the Urban Works Innovation Challenge, organized by the Mumbai Center in partnership with the Fu Foundation School of Engineering and supported by the RMZ Foundation, chose *Innovating for the Pandemic* as one of the core themes. Some of the selected startups worked directly on solutions for the pandemic, but all of them learned valuable lessons from this time and converted challenges into opportunities - overcoming operational uncertainties, developing new tech, driving digital adoption, improving financial planning, changing work culture, and optimizing resources. Three teams from India were selected as winners.

With guidance from the Urban Works mentors, these startups showed incredible resilience in the face of the unforeseen pandemic. Their main takeaway was that innovation can help overcome negative externalities. Since great businesses are almost always built against the odds, this resilient and innovative mindset of the startups bodes well for their future.

Urban Works Winning Startups

PERSAPIEN INNOVATIONS

PerSapien Innovations is a hands-on startup that works on hardware solutions for chemical-free sanitization.

With operations heavily affected during the pandemic, the company channeled its resources to tech development and this resulted in a new product called Airlens Minus Corona, a sanitization and disinfection solution.



URDHVAM ENVIRONMENTAL TECHNOLOGIES

Urdhvam Environmental Technologies has developed a borewell recharging solution for water conservation.

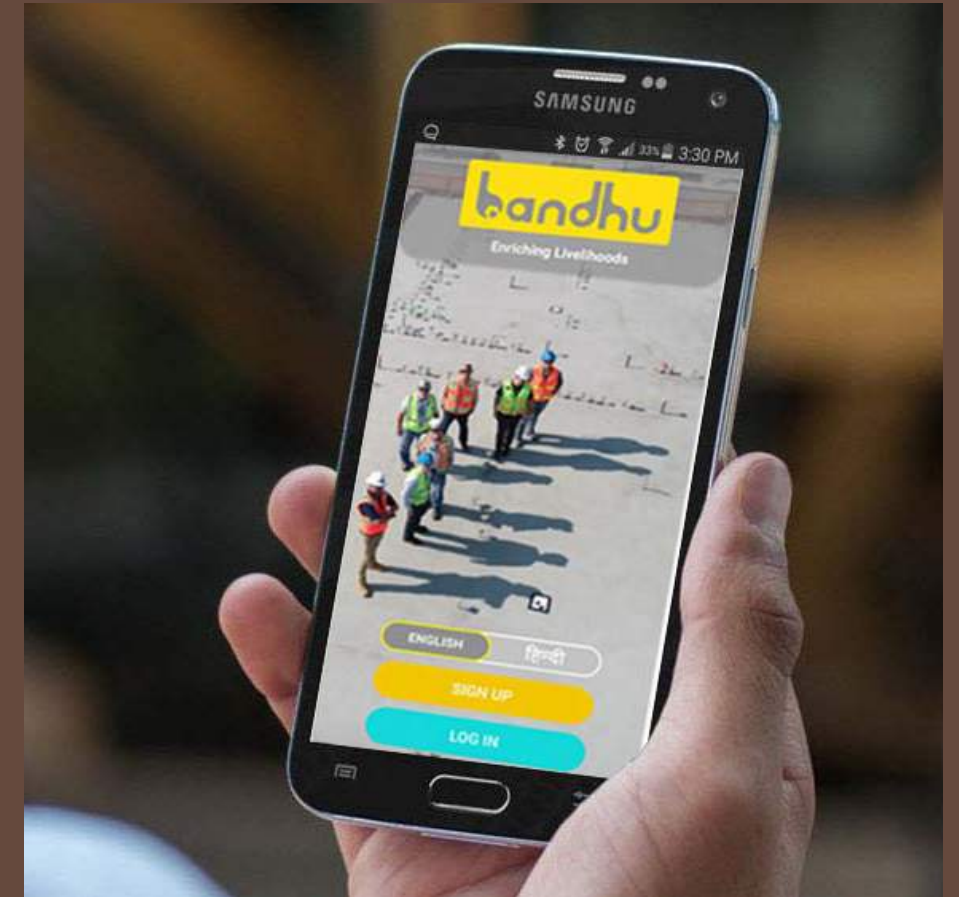
The company faced the challenge of dealing with cash-strapped customer segments of small farmers and microenterprises, and scant funding for water management due to the pandemic. The team utilized this time to sharpen its go-to-market strategy. Reduced travel during this period increased water demand domestically and this proved to be a silver lining.



BANDHU URBAN TECHNOLOGIES

Bandhu Urban Technologies runs a blue-collar employment portal.

A big challenge of the pandemic for the company was onboarding a large number of workers at scale. However, this also meant less competition for user acquisition – it was the only player left in the target geography. With digital adoption peaking during the pandemic, the value of the Bandhu app actually increased with constrained mobility.



Project Highlights

- 11 month mentorship program, 19 virtual Training and Mentoring sessions.
- Participation by noted academic institutes, government bodies and private organizations, including IIT Bombay and Kanpur, the Confederation of Indian Industry (CII), TISS, Unilever, Marico.
- Ten expert workshops and panel discussions on business planning for social impact.
- Distinguished Columbia University alumni served as project Advisors, including Sharad Sanghi, Pirojsha Godrej, Vaishali Sinha, Swati Salgaocar, and Shom Hinduja.

URBAN WORKS
INNOVATION CHALLENGE 2020-2021

The Decade of Entrepreneurship:

Interview with

SANJEEV BIKHCHANDANI



Studies show that the current decade will witness a manifold increase in the number of successful startups in India. We spoke to renowned entrepreneur, Sanjeev Bikhchandani, Co-Founder and Executive Vice Chairperson of Infoedge, and Advisory Board member of the Mumbai Center.

Congratulations on winning the Padma Shri award for your incredible contribution to India's entrepreneurship ecosystem in 2021. This year, 11 startups went public and 46 new unicorns were created in India. Please can you comment on why this is significant for the country.

SB: I think it is very significant because it shows that the ecosystem has come of age. When companies go public, investors get exits. This is a validation of their investment in India and this leads to more investors and investment. In the last month, valuations have corrected because of overheating markets, but so long as the underlying business is sound and solid, over a medium to long term basis, India has a good case for more startup growth and investment.

You don't come from a business background. In a country where legacy, family-owned businesses are more prevalent, how did you

get the courage and the ideas to create your own business?

SB: Most educated, urban, middle-class Indians in my generation were brought up not to be risk takers, but to study and work hard and get good jobs. From an early age, I wanted to be independent. From about five years of working in two large multinationals, I learned a lot but it reaffirmed my belief that I should do something on my own. At age 26, I finally took the plunge.

Looking back at 1997 when you founded Naukri.com, what were some of the main challenges and opportunities in starting up?

SB: In 1997, we launched Naukri. We took all the newspapers and magazines around the country and all the employment ads and put them up on the Internet. There was little traffic. There was no revenue model or market. Poor infrastructure was a struggle as well. We raised venture capital in the year 2000 and things changed. The first seven years after launching Naukri were pretty much touch-and-go.

You have also invested in some prominent Indian startups such as Zomato. What is your investment thesis?

SB: There is a team doing the diligence. Some

of the things we look at: natural traction - clients, downloads, revenue without any ad spends. Perhaps then they are on to something. Then you dig deeper in the revenue models and team credentials - how capable is the team technically, in terms of people skills, commitment, and fairness and integrity.

Who are some of the entrepreneurs or thinkers that have influenced your investment philosophy?

SB: You learn constantly and keep absorbing knowledge. We have all learnt a lot from Google and Facebook. Our own experiences have taught us. My journey as an entrepreneur for 10-15 years has taught me a lot.

Do you see any positives from the pandemic for tech companies?

SB: Yes, many of our companies have grown during this time. For example, Policybazaar has seen increased traction because health insurance has suddenly become the thing to buy. However, some parts of the business have suffered. Similarly, with Zomato, dining suffered but deliveries took off.

In a Forbes interview you said "customer money is more important than investor money". Do you think that a common mistake any startup makes is not enough customer discovery/market research?

SB: Even today, the smartest entrepreneurs are always customer focused.

Do you think startups should be handling tough problems? And how can more capital be directed toward social change challenges of today including climate change, mental health, gender security, etc.?

SB: If the capital seeks financial returns only, then that capital is slightly reluctant to come and invest into such sectors. Therefore, you should look for capitalists with a different kind of motivation - it may not be as large a pool. For example, if you look at unemployment in India, Zomato is for profit but it has 300,000 riders. Similarly, Naukri has enabled millions to find jobs. But you won't always be able to marry

commercial profit with sustainable development goals. The problem is measurability and accountability. How does the investor measure the quality of the outcome? Do-good kind of capitalism has to face scrutiny.

As a cofounder of Ashoka University, you have supported the strengthening of higher education in India. How can Columbia University support startups in India?

SB: All incubation efforts are important. But what is fundamental is developing the student. Igniting the spark of entrepreneurship among students is half the battle won. The Indian Institute of Management's goal was never to create entrepreneurs, but this happened because of the creative culture it encouraged.

There are very few women founders in tech startups. How can we change this?

SB: You have to get more women in engineering colleges. That is how you will get more women founders in tech startups. We need to look at examples such as Columbia where the gender ratio is almost 50%, and need to emulate that in India.



HEALTH AND MEDICINE



Preventing and Detecting Cancer

In the last two decades, cancer incidence has almost doubled. Recognizing the key role that screening programs could play in the early detection of cancer, Columbia Global Centers | Mumbai partnered with the Herbert Irving Comprehensive Cancer Center (HICCC) to launch a six-part seminar series entitled *Screenings that Save: Cancer Prevention and Detection*. For this series, the Center was able to secure 17 leading experts from Columbia University and Indian institutions who shed light on risk factors, challenges in cancer care during the pandemic, cancer care delivery, and best practices in screening and early detection to improve survival outcomes in India and the world.

The series generated three important findings:

- Our current research on cancer has huge gaps; there are enormous disparities in data from populations and countries with fewer resources
- Collaboration between health and medical experts across borders is essential
- Investment in cancer needs to be ramped up, both from public and private donors



"Prevention, screening and early detection are of vital importance for reducing the escalating cancer burden. To that end, the partnership between the Herbert Irving Comprehensive Cancer Center and Columbia Global Centers | Mumbai for the 'Screenings that Save' initiative strengthens this endeavour in India and beyond."

– DR. ANIL RUSTGI, Director, HICCC

BREAST CANCER

The inaugural webinar of the series was held in October 2020 during the Global Breast Cancer Awareness Month. It featured leading breast cancer experts, Roshni Rao, Chief of the Breast Surgery Program at the New York-Presbyterian Columbia University Irving Medical Center; Mary Beth Terry, Professor of Epidemiology at the Mailman School of Public Health; Sumeet Shah, Chief Oncologist at Silverline OncoCare, India. The experts traced prevalence and trends, showing how breast cancer is the most common cancer affecting women globally, and in India. They laid emphasis on the importance of early detection practices like mammography and self-breast examination as the cornerstone of breast cancer control while also highlighting the importance of multidisciplinary management, emergency treatment of acute cases, and use of telehealth services in consultation and treatment during the pandemic.



GASTROINTESTINAL CANCER

To mark the global Stomach and Pancreatic Cancer Awareness Month, a webinar was held in November 2020 to address gastrointestinal cancer, a leading cause of morbidity and mortality from malignant disease globally. Expert panelists included Gulam Manji, Director of Medical Oncology and Translational Research, Pancreas Center at HICCC; Jeanine Genkinger, Associate Professor of Epidemiology at the Mailman School of Public Health; Vikram Chaudhari, Consultant GI-HPB Surgeon, Surgical Oncology, Tata Memorial Center, Mumbai. Panelists discussed the poor prognosis of these cancers and shed light on the importance of cost-effective screening strategies and regional screening programs in areas where incidence of gastrointestinal cancers is high.



CERVICAL CANCER

Cervical cancer is one of the most preventable malignancies among all cancers with screening being identified as the most effective approach in cervical cancer control. A panel featuring Louise Kuhn, Professor of Epidemiology at Columbia's Mailman School of Public Health; Sharmila Pimple, Professor of Preventive Oncology at Tata Memorial Hospital, Mumbai, shed light on the need for timely vaccination in young girls, regular screening tests in young and middle-aged women, and targeted treatments for women with established cervical cancer disease, as well as continued investment in understanding and overcoming psychosocial, institutional, and access barriers.



ORAL CANCER

One of the most easily detectable and preventable cancers, oral cancer is the sixth most common cancer globally. India contributes almost one-third of this total burden. An online panel was held to mark Oral Cancer Awareness Month in April 2021, featuring Salvatore Caruana, Director of Head and Neck Surgery at New York-Presbyterian/Columbia University Irving Medical Center; Monika Arora Director and Professor of the Health Promotion Division at the Public Health Foundation of India; Arjun Singh, Fellow, Head and Neck Surgery at the Tata Memorial Hospital, Mumbai. The panelists identified the role of modifiable risk factors such as alcohol and tobacco use in the development of oral cancer, and advocated for investing in public awareness through mass media campaigns, promoting screening for oral cancer, using technology in early detection of precancerous and cancerous lesions, use of tobacco Quitline services, formulating comprehensive tobacco control policies and programs, and strict enforcement of the different tobacco control laws as some of the solutions to tackle the problem of oral cancer in India and the world.



LIVER CANCER

The fifth panel of the series showcased risk factors leading to liver cancer, addressed issues around hepatitis vaccinations, and explained linkages to routine screening and care. The panel featured Regina Santella, Professor of Environmental Sciences at Columbia University's Mailman School of Public Health; Elizabeth Zheng, Transplant Hepatologist at the Center for Liver Disease and Transplantation at New York-Presbyterian/Columbia University Irving Medical Center; Rajesh Dikshit, Director of the Centre for Cancer Epidemiology at the Tata Memorial Centre, Mumbai. The panelists emphasized the importance of primary prevention strategies such as Hepatitis B vaccination, reducing alcohol consumption, avoiding smoking, and limiting exposure to environmental factors such as aflatoxins to reduce the incidence of liver cancer. Additionally, they spoke about the need for creating community awareness, early diagnosis, and management of viral hepatitis at all levels of healthcare.

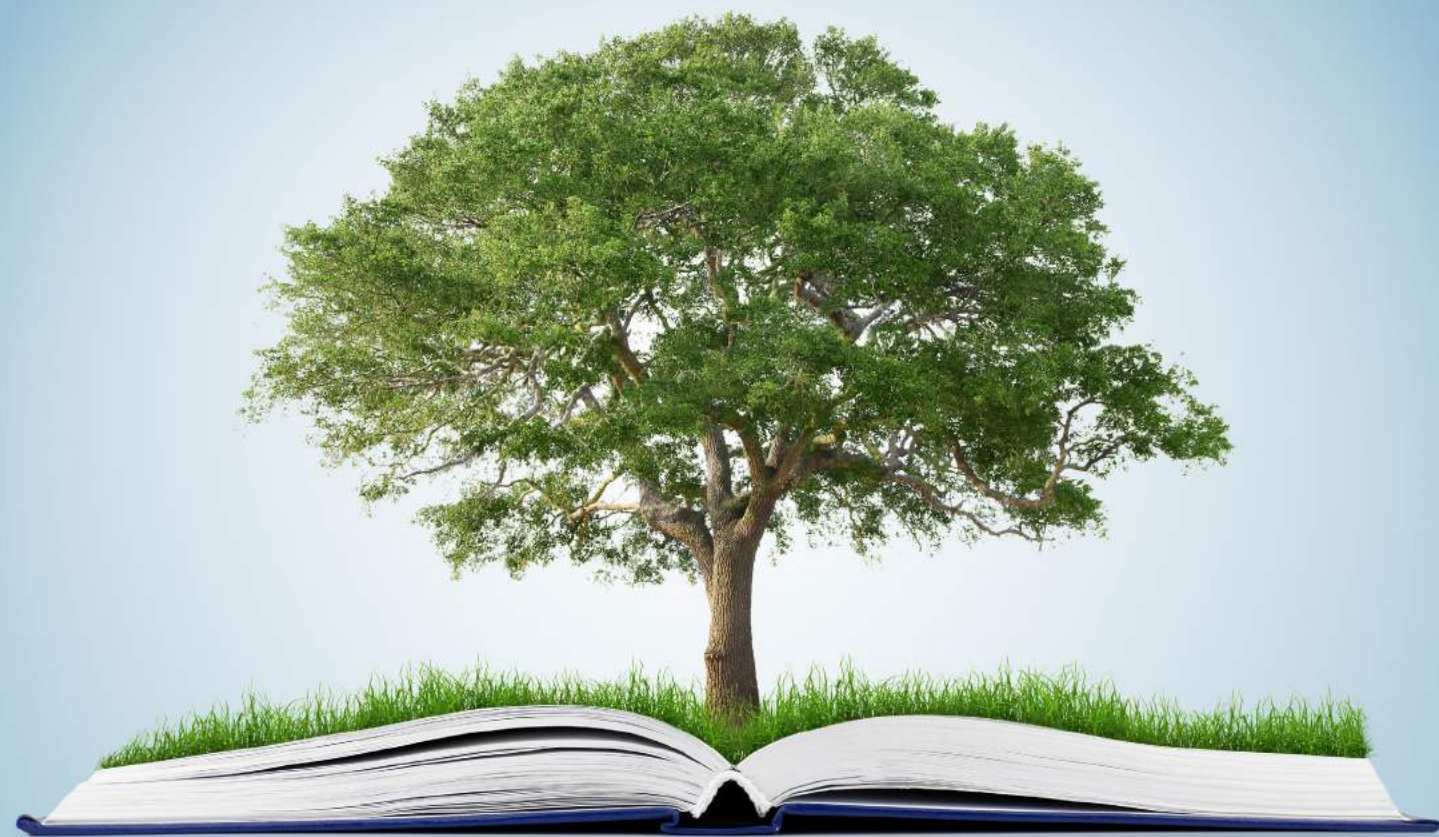


BLOOD CANCER

The final webinar of this series was held in September 2021 during the global Blood Cancer Awareness Month. Blood cancer is an umbrella term for a large group of cancers, including leukemia, lymphoma, and myeloma. Panelists included Rajshekhar Chakraborty, Assistant Professor of Medicine at Columbia University Irving Medical Center; Justine Kahn, Assistant Professor of Pediatrics at Columbia University Irving Medical Center; Venkatraman Radhakrishnan, Professor of Medical Oncology at the Cancer Institute (W. I.A) Chennai. The webinar provided key solutions at individual and systemic levels and promoted increased collaboration, improved enrollment in clinical trials, development of protocol-based treatment models, and increased research to improve survival outcomes and overcome challenges posed by blood cancers.



EDUCATION, CULTURE AND KNOWLEDGE



Digitalizing Educational Spaces

Over the past year around the world, lockdowns and physical closures have deeply affected institutes of formal and public education. A UNESCO study found that in India alone, 320 million students were affected by such closures where many institutes took recourse to the virtual medium to fulfil their educational mandates. While the pandemic exposed deep gaps in these systems, many institutions of learning met these challenges with thoughtful and innovative interventions, keeping the interests of their students and audiences at the forefront.



The Mumbai Center's education programs concertedly explored how best practices that emerged from this period could pave more inclusive and robust ways of education and engagement. In partnership with the U.S. Embassy's American Center in New Delhi, the Center organized an online symposium entitled *The Digital Turn in Education: Challenges and Opportunities in the Wake of Covid-19* on March 26, 2021, comprising two sessions on K-12 and higher education institutions that addressed best practices in virtual learning, disruption in research activities, challenges in funding, and other pressing issues. Ten speakers from leading Indian educational institutes such as the Indian Institute of Management-Bangalore, Ashoka University, St. Xaviers College in Mumbai, The Deens Academy in Bengaluru, and The Sanskaar Valley School in Bhopal participated in the conference along with Detra Price-Dennis, Associate Professor of Education at Teachers College, Columbia University, and Professor Ellen B. Meier and Ms. Karen Kirsch Page from the Center for Technology and School Change at Teachers College, Columbia University.

Recommendations for Schools

INNOVATIVE TEACHING

- Employing innovative learning formats that keep students engaged such as quizzes, virtual tours, and games
- Pacing classes or cutting down the duration, with adequate breaks and non-academic programs to combat burnout and fatigue
- Reducing the curriculum and staggering classes into smaller sizes to give qualitative attention to students
- Creating a bank of resources and recordings for student reference and revision
- Allowing students back on campus for practical, application-based learning

SOCIAL WELLBEING

- Creating online clubs and student communities for extracurricular activities, buddy/ partner or mentor systems, and chat sessions with teachers to promote personalized attention and prevent disconnection and alienation
- Convening sessions on life skills and mental health issues, providing counseling services for students and staff, and providing checklists for staff and parents to look for symptoms
- Creating support groups for teachers and parents, together and separately, to discuss concerns and share ideas and learnings

TECHNOLOGY USE

- Increasing access to affordable devices and Internet services for students and staff
- Instituting trainings for staff, students, and parents on relevant software platforms and digital tools
- As different grades and disciplines may have diverse logistical needs, selecting appropriate software and digital tools that align with learning objectives, while keeping security concerns in mind

APPROPRIATE ASSESSMENT

- Changing the format of assignments and exams to reduce student stress and better measure learning outcomes
- Replacing formats that might be easier to cheat in, and working with students and parents to emphasize honesty
- Collecting feedback from staff, students and parents through surveys, virtual open houses, and town halls, to address concerns, and share ideas and best practices.



As spaces of public education, museums have a mandate of disseminating knowledge to a broad array of audiences and stakeholders. To understand how leading museums had responded to the pandemic, the Center organized an online panel discussion entitled *The Future of Museums in the Age of Pandemics* on May 25, 2021.

Recommendations

- Creating people-centered virtual programs
- Upgrading technology and training museum staff
- Leveraging social media channels
- Making archives and libraries available online
- Creating tailored programs for families, schools, and other target audiences
- Creating hybrid experiences for reaching wider regional and global audiences
- Revisiting digital collections to highlight diverse perspectives
- Adopting and tracking appropriate metrics to gauge effectiveness
- Developing new business models through advertising and e-commerce stores
- Leveraging community-driven donations through fundraisers and sponsorship initiatives such as “adopt an object” or “adopt a gallery”

“Our sort of secret power in the museum sector is to create lasting impact on the people who come to our physical sites and who engage with us digitally, and at this point going into the future, I believe that those two types of experiences of museums will overlap more than they don’t.”

– DOUGLAS HEGLEY, Chief Digital Officer, The Metropolitan Museum of Art, New York

“Museums are no longer viewed as merely repositories of antiquities but as centers of informal education and a civic space for social interaction.”

– SABYASACHI MUKHERJEE, Director General, Chhatrapati Shivaji Vastu Sangrahalaya, Mumbai

“I think that through this pandemic, we’re going through a calibration of who we are, how we are responding to this, how we are engaging with the world around us. That is very important and I think museums have played an important part in generating discussions and a discourse around this.”

– TASNEEM ZAKARIA MEHTA, Managing Trustee and Honorary Director, Dr. Bhau Daji Lad Museum, Mumbai; Columbia Journalism School

STUDENT PROGRAMS

VIRTUAL INTERNSHIPS

Kick-started as a swift response to lockdowns and travel uncertainties across the globe in Summer 2020, the Columbia Global Centers Virtual Internship Program completed its fourth successful cycle in Summer 2021 with a host of partner organizations across the world. A diverse set of opportunities spanning industries and geographies was offered to undergraduate, graduate, and recently graduated Columbia students. The Mumbai Center created 50 of the 342 opportunities created globally and placed 10 interns in the following organizations:

- Aga Khan Trust for Culture
- Jehangir Nicholson Art Foundation
- Museum of Art and Photography
- ReNew Power
- Shillim Institute
- Youth for Unity and Voluntary Action

GRADUATE STUDIES FAIR

Following the successful multi-city launch of the Columbia Graduate Studies Fair in 2019 and given the exigencies of the year, the Center organized a week-long virtual fair in November 2020 that welcomed attendees from across the country. The online sessions provided opportunities to learn about academic programs, admissions processes, career support and more at Columbia, and gave participants the chance to connect with faculty, admissions staff, and alumni. Participating schools and departments included:

- Mailman School of Public Health
- School of Professional Studies
- Columbia Journalism School
- Graduate School of Architecture, Planning and Preservation (GSAPP)
- Department of Statistics
- Department of Mathematics

CAREER FAIR

In partnership with the Career Development Cell at Columbia University's School of Professional Studies, the Center conducted a Virtual Career and Networking Fair for the school's current and recently graduated students on January 28, 2021. In order to expand professional and career development opportunities, this program connected students with top-tier organizations operating in India. Participating organizations included:

- Bloomberg
- Google
- NASDAQ
- Tata Sons
- Tata Consultancy Services
- Wipro
- Genese

STUDENT RECEPTIONS

The Center partnered with the Columbia Alumni Association of India to conduct a reception and send-off for new Columbia students, which occurred virtually this year on July 7, 2021. Earlier, on May 14, 2021, the Center also co-hosted a virtual reception with the Graduate School of Architecture, Planning and Preservation for new students from India starting at the school.



"The Columbia Global Centers | Mumbai has been an invaluable partner in GSAPP's outreach to prospective students for many years."

– STEFFEN BODDEKER, Columbia GSAPP Associate Dean of Admissions and Outreach

Covid-19 Initiatives by Students and Alumni

The unprecedented challenges of the pandemic inspired the Columbia community to contribute significantly to India's efforts in multiple ways, whether through direct relief efforts or through strategic and targeted initiatives.

Like other countries, India's efforts to combat the pandemic were stymied by another type of pandemic—the spread of false health information. In order to counter this misinformation, alumni of Columbia's School of Journalism, including Barkha Dutt ('98), Aditi Sangal ('16) and Aman Sethi ('09) among others, published analytical stories as well as reports from the ground about the pandemic in India in national and international news outlets. Another alumnus, Meghna Suryakumar (Columbia Law School '06), founder of Credwatch, launched a new initiative called Verify to curb misinformation about the virus and help citizens assess the legitimacy of Covid-19 resource suppliers and service providers through Artificial Intelligence and Machine Learning tools.

Several Columbia students and alumni engaged in fundraising activities, contributing their time and skills to provide much-needed resources. The Columbia Business School Class of 2023 launched two initiatives to help raise funds for nonprofit organizations working on the ground. The MBA Class of '23 partnered with the Mukul Madhav Foundation in Pune to raise funds for their initiative #fightbackwithkindness that aims to provide ventilators and oxygen supplies, food for marginalized communities, and toolkits for frontline workers. Students from the Class of '23 also launched the 'Pay It Forward' initiative where they offer consultation services on various aspects of the MBA application process to anyone donating to non-profit organizations that work for Covid-19 relief in India.



"We have many students, faculty members, and staff from India or with family in India, who have been affected directly by the crisis and who have been lending their support, from building hospitals to providing supplies and to helping where needed. This tragedy has shown what a truly global community we have at Columbia and how deeply we are connected to one another, particularly during times of crisis."

– MARY C. BOYCE, Provost, Columbia University



Aakash Budhiraja is a student in the Columbia Business School ('23). Here are excerpts from an interview he did with CGCM.

Please tell us about the Pay it Forward initiative and how you are contributing to COVID efforts in India.

AB: Pay It Forward takes from the spirit of Columbia and the Columbia ethos of paying it forward. I think that was truly one of the inspirations that we had. The broad idea is that we are a pool of young professionals who've been able to get into business school, one of the top schools in the globe, and there are a lot of people who want advice around this. So what we are asking people to do is if they want certain advice, they can seek it from us. All we want them to do is just contribute to any COVID fundraiser or relief effort of their choice. It could be local or it could be an international organization. We've done a few things there. We're doing one-on-one consultations with people for thirty minutes to one hour. We've also done boot camps or helped them work on the different aspects of the application process, be it about taking the GMAT to finding schools to apply to. That's broadly what Pay It Forward is all about.

How did you come up with this idea?

AB: In terms of the genesis of the program, we came to it from being in a situation of feeling very helpless. We were all sitting at home and we looked at India and the COVID cases were just growing like crazy. So I think that feeling of helplessness forced me to think, to look around and see how we could contribute. This time around, I wanted to do something

more than just money because there's a limit to how much I can contribute as an individual and I feel that a lot of people also felt that. That's where the idea came from that we could maybe donate our time in exchange for the kind of knowledge we bring to the table and encourage more people to contribute.

What has the response been like?

AB: When we started off the Pay It Forward Initiative, it started in spurts. About twenty of us in the Columbia Business School community in India came together and started this. We realized other schools had also come up with something similar. We merged it all together under the Pay It Forward umbrella. Coordination efforts would end up taking three, four, or five hours. It could become a little taxing to get a lot of stakeholders in the same place. But eventually we managed to sort of pull it through. Within the course of one and a half months, we managed to raise about Rs. 4,000,000 through various efforts and in the process, touch over 500 to 600 students.

What advice would you have for someone else, especially another student who wants to contribute to the COVID relief efforts in the country?

AB: I think you just need to realize that you want to help people. Start with whatever you can. Don't feel overburdened by the fact that you have to do something great. Eventually people will come together and help you build it up.

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Leaf of a sycamore tree;
the oldest tree on Columbia University's
campus is an American Sycamore

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Leaf of a peepal tree,
which has cultural, medicinal and
artistic significance in India

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