

# ELEVENTH HOUR

**COP**ing with Climate Change

**COP  
Edition**

**EXCLUSIVE**

Interview with  
**Christian Schwarzer**

- Founder, GYBN

Featuring Local Initiatives in India



Eco Club, TERISAS brings to you "Eleventh Hour", the seventh edition of Vasundhara magazine, curated to exhibit the relevance of the Conference of the Parties (COP), with emphasis on COP26 and the firm decisions/outputs the world is anticipating as the need of the hour. The information in the magazine is for general use only and has been compiled from various research papers/articles/government databases. Some personal experiences and anecdotes have also been shared for which we extend our sincere gratitude to the contributors. The content is accurate to the best of our knowledge as of 24th October, 2021. We apologize for any inadvertent errors that may exist.



## THE TEAM

### EDITORIAL BOARD

EDITOR:  
Hemavathi S Shekhar (*PhD. Legal Studies*)

SUB-EDITOR:  
Anshita Jindal (*MA SDP*)

MANAGING EDITOR:  
Kashish Bansal (*MA SDP*)

### DESIGN

DESIGN EXECUTIVE:  
Nivedita Jha (*MBA SM*)  
Vibhusha Gupta (*MA SDP*)

MEMBERS:  
Ashwini Ashok Huggi (*MSc ESRM*)  
Dipanshu Chaturvedi (*MSc ESRM*)  
Riddhi Mukherjee (*MSc Economics*)

### ARTISTS

Ananya Pandey (*MSc Economics*)  
Ujjay Mohan (*MSc ESRM*)

### CONTENT TEAM

CONTENT EXECUTIVE:  
Nidhi Mandloi (*MBA SM*)

CONTENT LEAD:  
Arpita Victor (*MA SDP*)  
Isha Narayan (*MSc ESRM*)

MEMBERS:  
Akshata Sinha (*MA SDP*)  
Amulya Varma (*MSc Economics*)  
Aparajita (*MSc ESRM*)  
Archana Pandey (*MSc ESRM*)  
Arihant Jain (*MA SDP*)  
Divija Kumari (*MA SDP*)  
Gauranshi Chamoli (*MSc ESRM*)  
Kalpana Patel (*MSc WSG*)  
Khushi Rani (*MSc Economics*)  
Kriti Sharma (*MSc Economics*)  
Lovish Raheja (*MSc ESRM*)  
Mehr Munjal (*MSc Biotechnology*)  
Neha K N (*MSc ESRM*)  
Neha Singh (*MSc CSP*)  
Parth Tondon (*MSc ESRM*)  
Pranava Lalitha (*MS SDP*)  
Pranayak Sharma (*MTech REEM*)  
Saptarshi Kar (*MTech REEM*)  
Swarna Singh (*MBA BS*)  
Urvika Goel (*MSc ESRM*)  
Vedika Singh (*PhD. Business Sustainability*)

1. Editor's note	1
2. The Age of the Anthropocene	2
3. Highlights from the UNCCC	3-4
4. Milestone check: from COP21 to COP26	5
5. Green Financing @COP26	6
6. Interview with Alumni	7-9
7. Climate-resilient villages	9
8. India and UNFCCC: Past Achievements and Future Goals	10
9. Interview with Christian Schwarzer, GYBN	11-13
10. Islands of uncertainty: the disproportionate impact of climate change	14
11. Species at the frontline	15-16
12. The South Scenario	17-18
13. India's breakthrough towards fighting climate change	19-20
14. Vocal for Local	21-22
15. Interview with Divya Sharma, The Climate Group	23-24
16. Drawbacks in Agenda Items and Proposed Enhancements	25-26
17. Shift in the era of development	26
18. COP at the Covid hour	27
20. Over promise, underplay	28
21. Role of youth and COY16	29
22. Knowledge Upgrade	30
23. Messages from Faculty and Founder	31-32
24. Funzone	33-34
25. References	35-36



Email: [vasundhara.ecoclub@terisas.ac.in](mailto:vasundhara.ecoclub@terisas.ac.in)  
Instagram: [ecoclubtsas](https://www.instagram.com/ecoclubtsas)  
Twitter: [ecoclubtsas](https://twitter.com/ecoclubtsas)  
Facebook: [ecoclubtsas](https://www.facebook.com/ecoclubtsas)



# Editor's Note

Climate Change poses an impending threat to humanity. Despite crucial advances, there continues to be a significant gap between the articulation of climate change and substantial solutions. We need to understand that Climate Change is not just an environmental concern, but that it extends to social, economic and political aspects of everyday life.

Modern society has never experienced disruption on a global scale until the COVID pandemic. During an entire year, people's lives came to a halt, and we faced a crisis we never imagined, which accelerated the already existing social inequalities. But now, as we are returning to our "normal" lives, we must not forget, the climate crisis we are facing will be a million times worse, and it will be fatal. But, should we return to normal? Because normal was the problem.

This year's 26th UN Climate Change Conference of the Parties will be one of the most important spaces for stakeholders to engage in the decisions and plan the future of our earth at the highest level. As 197 country leaders meet during COP26, the world watches with hopes to see how we will ensure the world's temperature below 1.5 Degree celsius. For two weeks, heads of states will negotiate and define the fate of future generations. COVID taught us that our governments can take unprecedented action. Humanity has always become stronger and more resilient after an existential crisis. We can overcome the current COVID crisis and build back better with increased resilience to deal with the Climate Crisis.

As we take in the uncertainty of what's going on around us and come to grips with our current truth, we should embrace this time as a rare window of opportunity to restore our community, economy and the planet as it should be. This is why we must remain hopeful. In the words of Rebecca Solnit, "Don't despair: The climate fight is only over if you think it is... I don't know exactly if or how we'll get to where we need to go, but I know that we must set out better options with all the passion, power and intelligence we have. A revolution is what we need, and we can begin by imagining and demanding it and doing what we can to try to realize it. Rather than waiting to see what happens, we can be what happens."

- **Hemavathi S Shekhar**  
Editor, Vasundhara Issue 7  
PhD. (Legal Studies)  
@TERI School of Advanced Studies



# The Age of the ANTHROPOCENE

Life on Earth as we know it dates back millions of years, and homosapiens are believed to have evolved around 300,000 years ago. One of the things that have been constant in the world is the changing climate. This has helped create and put to extinction a variety of species. However, humankind is also now threatening the extinction of species such as mammoths and saber-toothed tigers. Climate Change is a natural phenomenon, but anthropogenic activities have been accelerating the rate and magnitude of change which is threatening to destroy the only planet we know.

Some of these anthropogenic sources are -



## FOSSIL FUELS

Fossil Fuels like coal, oil, gas provide about 80% of the total energy needs. Burning fossil fuels generates energy required for transportation, industrial activities and production of electricity and heat, thereby responsible for about three-quarters of our carbon emissions leading to global warming. Increased Carbon Emissions has lead to the oceans have become 30% more acidic, impacting aquatic life as well as coastal communities.

## DEFORESTATION

A large amount of carbon is stored in forests and clearing or burning them releases a huge amount of carbon dioxide. Deforestation is responsible for about 11% of the global emissions.



## AGRICULTURE

Agricultural sector is a major source of climate change due to greenhouse gas emissions but it is also facing the brunt of it. Livestock itself is responsible for 44% of total methane emissions and the use of organic and mineral nitrogen fertilizers releases 53% of nitrous oxide into the atmosphere. Agriculture and livestock farming contributes 17% to the global emission.

Taking the present situation in hand after the industrial revolution according to the Intergovernmental Panel of Climate Change (IPCC) in their sixth assessment, the world will probably exceed 1.5 degree celsius within the next two decades. These activities if not stopped will eventually threaten the life of all species. According to the Global Climate Risk Index 2021, strong rains triggered floods in 14 Indian states in 2019, killing 1,800 people and displacing 1.8 million people. Overall, 11.8 million people were impacted by the severe monsoon season, with an estimated economic loss of \$10 billion. extreme climate events predicted in the near future, these losses will increase and will eventually destroy the planet.



# HIGHLIGHTS FROM THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)



## 1995: COP1, BERLIN

**Berlin Mandate** established with a series of indefinite commitments and initiatives to mitigate climate change that the parties could choose according to their capabilities.



## 1996: COP2, GENEVA

"Binding quantitative targets" laid down to limit GHG emissions.



## 1997: COP 3, KYOTO

Binding targets on GHGs set for 37 countries, est. the Kyoto Protocol which came into force in 2008.

## 1998: COP 4, BUENOS AIRES



2 year "Plan of Action" adopted to advance efforts for the implementation of the Kyoto Protocol.



## 1999: COP5, BONN

**Berlin Mandate** established with a series of indefinite commitments and initiatives to mitigate climate change that the parties could choose according to their capabilities.



## 2000: COP6, HAGUE

U. S. proposes credits for **carbon "sinks"** in forests; negotiations on financially enabling developing countries to mitigate climate change.



## 2001: COOP 7, MARRAKECH

Operational rules for international **emissions trading** among parties to the Protocol and CDM set; compliance regime est. alongwith procedures for **flexibility mechanisms; Adaptation Fund est.**

## 2002: COP8, NEW DELHI



**Delhi Ministerial Declaration** called for technology transfers from developed countries to minimize climate change impact.

## 2007:COP 13, BALI



**Bali Road Map** included the **Bali Action Plan** to address - shared vision, mitigation, adaptation, technology, and financing for climate change mitigation. BRM also included - forest management, creation of Adaptation Fund Board and review of the existing financial system.

## 2006:COP 12, NAIROBI



Five-year action plan adopted to further support climate change action in developing countries. Improvement of CDM.

## 2005:COP 11, MONTREAL



Also the first **CMP\***. Marked the Protocol coming into force. **Montreal Action Plan** made sure the Kyoto Protocol would remain in action beyond 2012.

## 2004:COP 10, BUENOS AIRES



Buenoss Aires Plan of Action adopted to better help developing countries; progress made in past decade discussed.

## 2003: COP9, MILAN



Adaptation Fund est. in 2001 set to primarily support developing countries.

## 2008:COP 14, POZNAN



**Forest protection** incorporated in international efforts to address climate change. Discussions on a successor to the Kyoto Protocol.

## 2009:COP 15, COPENHAGEN



**Forest protection** incorporated in international efforts to address climate change. Discussions on a successor to the Kyoto Protocol.

## 2012: COP 18, DOHA



**Doha Amendment to the Kyoto Protocol** - second commitment period to the Kyoto Protocol from 2012-2020 to address lack of commitment by some countries which included India.

## 2010: COP 16, CANCÚN



**Cancún agreements** where parties agreed to commit to a maximum temperature rise of 2 degrees Celsius; **Green Climate Fund** est. to finance projects and programs in developing countries.

## 2011: COP 17, DURBAN



Decision made to adopt a universal legal agreement on climate change by 2015.

## 2013: COP 19, WARSAW



**Warsaw mechanism** proposed to provide expertise and aid to developing countries to cope with natural calamities and extremities.

## 2014: COP 20, LIMA



**Intended Nationally Determined Contributions (INDC)** set to form the foundation of climate action post-2020. Significance of **National Adaptation Plans** emphasised.

## 2015: COP 21, PARIS



**Paris Agreement** adopted, ratified by 2016 when more than 55 countries ratified the agreement and come into force in 2020.

## 2016: COOP 22, MARRAKECH



Focus on water scarcity, cleanliness, and sustainability in the developing world. Emissions reduction emphasises and call for radical transformation of global economy for the same. Also the first **CMA\*\***.

### Notes:

\* Conference of the Parties Serving as the Meeting of the Parties to the Kyoto Protocol. Held annually as part of the UNCCC since 2005 alongside the COP to the UNFCCC

\*\* Conference of the Parties Serving as the Meeting of the Parties to the Paris Agreement. Held annually as part of the UNCCC since 2016 alongside the COP to the UNFCCC

Designed by Riddhi Mukherjee (MSc Economics)



## 2019: COP 25, MADRID

European Union reaches the **European Green New Deal** to achieve zero net emissions by 2050.

## 2018: COP 24, KATOWICE



**Solidarity and Just Transition Silesia Declaration** signed by 50 countries to ensure climate change policies included a just transition of the workforce.

## 2017: COP 23, BONN



A group of 30 countries, including Britain, Canada and NZ launched the **Powering Past Coal Alliance** to phase out coal by 2030. **Talanoa Dialogue** to assess NDCs and make them more ambitious.





# MILESTONE CHECK: From COP21 to COP26

**“Responsibility rests with each and every country. And we must all play our part. Because of the climate, the world will succeed, or fail as one.”**

**-Rt Hon Alok Sharma MP, President of the 26th United Nations Climate Conference (COP26)**

The crisis of the changing climate is not new; the world has seen enough catastrophic hellscapes, like Cyclone Idai in 2019 and the Australian wildfires in 2020, to name a few. The history of putting at forefront the climate urgency has examples of enough warnings by world leaders, scientists, researchers and even young activists such as Greta Thunberg. In an attempt to address these challenges, world leaders have made many promises, out of which some were implemented, and the others had moments wasted.

Now, the year 2021 has upped the stakes of this issue, with COP26 in Glasgow being touted as the most important climate meeting since the Paris Agreement was signed at COP21 in 2015 to tackle climate change.

**The following table depicts how various parameters relevant to climate change have altered since the Paris Agreement.**

THE WORLD DURING		
	COP21 in 2015	COP26 in 2021
World Population	7.3 Bn	7.9 Bn
Carbon in the Atmosphere	400 ppm	412.5 ppm
Number of Climate Related Policies and Laws at the global level	Between 1947-2015: 1616	Between 2015-2021: 863

*It is also worth noting that of all the laws and policies passed since 1947, almost a third of them were ratified between 2015-2021*

## What makes COP 26 critical in today's day and age?

Sources suggest that:

Around 200 international leaders and 36,000 participants are expected to attend the 2021 summit, making promises to address the climate issue. Without concentrated worldwide effort, ecological collapse cannot be prevented.

According to the IPCC, there are just nine years left till 2030 till we reach the tipping point in order to reduce the worst effects of the climate catastrophe before damage becomes irrevocable.

The newest historic assessment from the Intergovernmental Panel on Climate Change (IPCC) declared a "code red for humanity," confirming that unless carbon emissions are drastically reduced this decade, temperature rises of more than 1.5 degrees Celsius will be unavoidable and irreversible. It was a harsh warning of what may happen if COP26 fails to deliver on its promises of dramatic action.

COP26 is expected to address what has and hasn't been accomplished since the Paris Agreement in 2015, as well as lay out clear strategies to meet the Paris Agreement's goals.

A 'benchmark for success' in Glasgow 2021 is that new NDCs of countries are to be submitted by governments so as to make their combined effort robust enough to help the global temperature stay 'well below' 2 degrees, and preferably 1.5 .

Climate change is very real and the world is in an extremely precarious state. This is not only backed by scientists and statistics, but the unprecedented number of climate related disasters in recent times prove that this really is a now or never situation. The fate of the world lies in the decisions taken by our leaders at COP26 and what follows thereafter.

# Green Financing @ COP26



Unquestionably, finance plays an integral role in combatting climate change. Channeling finances to enable climate action is a challenge faced by every country, especially the developing ones. The aim is to achieve sustainable development by building greener and more resilient economies with the contribution of the finance sector. Climate finance will be a key factor in the success of COP26 in Glasgow, Scotland. There is a broad consensus that the investments necessary to achieve the climate goals should not be financed with scarce public funds, rather additional resources must be mobilized. The COP26 Private Finance Hub, led by Mark Carney in his capacity as UN Special Envoy and Adviser to the Prime Minister, will focus on building a system that mobilizes private finance to support the re-engineering of our economies for net zero. Finance issue will be addressed through Public Finance and Private approaches.

- Public Finance** is for the development of infrastructure we need to transition to a greener and more climate-resilient economy. Various public finance priorities have been identified like Multilateral Development banks, Public Development banks and many more.
- Private Finance** is to fund technology and innovation, and to help turn the billions of public money into trillions of total climate investment. The private finance hub will work with the private sector and will focus on other aspects such as Reporting, Risk management, Returns and mobilization by connecting available capital with investable projects and encouraging new market structures.

## COP 26 Agenda on Finance:

- Developed countries must deliver on their promise to raise at least \$100 billion in climate finance each year to support developing countries.
- The initiation of consultations on a new climate finance strategy for the period after 2025.
- UK is doubling down on the international climate finance commitment to provide £ 11.6 billion to developing countries over the next five years to 2025/2026.
- The World Bank has increased its climate finance target to 35 percent of total lending.
- Glasgow Financial Alliance for Net Zero initiated before COP26 has seen more than 250 financial institutions responsible for \$88 trillion in assets commit to net zero emissions by 2050 at the latest.

Every professional financial decision should take the climate change into account in managing climate risks and seize climate opportunities. Besides, coherent and holistic action is needed to curb the issue of climate change.



# INTERVIEW WITH ALUMNI: Mr. Martand Shardul

Policy Director at Global Wind Energy Council, India



**Q: What is the status of renewable energy nationally and globally and what sort of role do you think renewable energy discussions will have at COP 26? Can this transition towards clean energy systems address the climate change concerns to a significant extent?**

This year, renewable energy has been listed as one of the key agendas at COP 26. There are also going to be massive discussions on net-zero energy as well as net-zero emissions in future. The International Energy Agency (IEA) had recently published a report on net-zero targets and the challenges along this path. (Net Zero by 2050, May 2021). Most of the countries have come up with their net-zero targets as well. However, India has not done that so far.

In the year 1947, when India achieved Independence, our per capita consumption of electricity was only 16 units. At present, it is 1200 units, which is way below the world average of 3000 units. The government of India has also set targets for Renewable energy generation in the country, which requires an investment of around 500 billion. This figure is equivalent to the global investment in the renewable energy sector. So, at a national level, there is a big challenge ahead of us, which needs to be tackled to address the climate change problem.

The reports submitted by UNFCCC, GWEC, IEA and other international organizations, highlight the fact that most of the countries have not pushed up their NDCs. The NDC synthesis report by UNFCCC, 2021, gives a much clearer picture of the actions being taken by the respective governments. Currently, the global electricity generation capacity is 6000GW. Out of this, Renewable energy is now close to 1000GW while the rest 5000 GW is non-renewable.

So, there are three main challenges that the world is currently facing: 1.) There is a need to replace this 5000GW with renewable energy. 2.) The demand for energy added each year also needs to be taken care of. 3.) We need to ensure that the new power generation plants being installed should be clean and sustainable.

Another challenge here is that we would require additional costs for renewable energy installation of up to 7500GW due to the lower plant load factor of RE. So, discussions at COP 26 will mainly be centered on tackling these challenges. As part of the Paris Agreement, developed nations had promised to help transition developing countries towards a sustainable future.

They need to make good on those promises and help by transferring low-cost technology, grants, loans, and other forms of financial aid. Besides, these tasks cannot be solely achieved using public funds. Corporations across the globe need to step up too.

**Q: In terms of renewable energy, where does India stand and why? When wind energy is compared to solar energy in the Indian context, we see a decline in the use of wind energy. Being the Policy Director for GWEC and an expert in the field, what initiatives do you think are being undertaken now and in the future?**

Renewable Energy (RE) sources have a much lesser plant load factor as compared to conventional energy sources which is a big challenge. Presently, India has 39.6 GW of energy power plants installed cumulatively in the wind sector. Until recent times, wind energy had dominated the entire share of Res in India. Solar energy has exceeded very lately in this regard. Technically, there is no competition between solar and wind. It's unfortunate that REs are perceived as synonymous with solar energy due to the 'plug and play' power of this source.

It should be noted that wind energy plants have a higher plant load factor as compared to solar ones. Solar and wind together have the potential to provide proper balance to the grid since wind may be available even after daylight hours, unlike solar (large scale storage devices are quite expensive in the case of standalone solar energy). Keeping this in mind, the Government of India (GOI) has legitimized the hybrid wind-solar policy. Last year, we were able to only add about 1.1 GW of wind energy (WE) installed capacity in the country. The reasons for this were-

- (i) The pandemic situations disrupted the commissioning of the new plants.
- (ii) The price of cement, steel and other essential commodities went soaring.

We are also going to work on offshore wind. India has a target of installing 450 GW RE by 2030, out of which 140 GW is for installed WE capacity. 30 GW out of the 140 will be obtained from offshore wind. The fact is that we have not installed even 0.1 MW of offshore wind so far in the country which is supposed to be highly efficacious when compared to onshore WE.

India ranks fourth in terms of the installed wind

capacity globally. In December 2020, our PM honourable Narendra Modi Ji laid down the foundation stone of the world's largest hybrid RE park of 30 GW capacity in Kutch, Gujrat. Very recently the Danish government and the GOI jointly have set up the centre of excellence for offshore wind in India. In our outlook report, we have projected that India will be able to add 20 GW installed wind capacity by 2025, the majority of which will come from hybrid energy plants. Secondly, due to the advancing technologies like AI and 3D printing, the costs for

manufacturing wind turbines when we get to the economy of the scale will come down. As per a recent study of the Nature Journal, the cost of wind power generation will reduce by at least 30-50%.

At global level, 3M, GWEC, Adani Renewables and other global leaders in the energy sector have launched the 'Global Alliance for Sustainable Energy Initiative' which is targeted at greening and manufacturing in the RE sector.



# INTERVIEW WITH ALUMNI: Ms. Rozita Singh

Head of Solutions Mapping Accelerator Lab at UNDP, India

**Q: One of the focal themes of your lab is climate resilient livelihoods. Considering the time frame, can this be termed as one of the responses of the earlier COPs/preparedness for this COP, and what is the nature of this work?**

I am part of a network called the Accelerator Lab Network at UNDP, primarily an innovation network. The whole idea, when it was set up, was to have a learning network, where multiple countries across the region can learn from each other, find solutions to some of the most wicked development challenges. In 2019, we started with 60 labs set up in the UNDP country offices and India was a part of it. Now, we have 91 labs serving 115 countries. We do something called experimentation, i.e., running short loops of experiments. For instance, for climate resilient livelihoods, we were looking at how advanced technologies like IoT, artificial intelligence and block chain help in increasing the farmer's input. For block chain, we just concluded a small prototype- how to help spice growing farmers of India earn a little more. The whole idea is that block chain-based traceability can help in increasing the quality check, reducing the export checks, hence, getting a better price to farmers. This is the space we are looking at through climate resilient livelihoods and the principle here is: Even if we use high tech solutions, we also look at grass root innovations, indigenous knowledge, and leverage the existing solutions which are rarely user-led. There is a marriage of high tech and low-tech innovations in this phase. We are continuously scouting for cutting edge innovations. The labs around the world, being part of this globally integrated network draw inspiration from each other.

**Q: While going through the recently released Circularity Gap Report, it became evident that the share percentage of Circular economy is just 8.6%. On what fronts do we need to act to make sure that this share can mark an increment in consecutive years since the Circular economy is a highly potent strategy to fight climate change?**

This report came at an important juncture stating that our world is just 8.6% circular, also pointing out that material use activities have a greenhouse emission of 70%. When we apply a circular economy approach, we increase value retention by cutting out waste alongside slashing emissions. We have a very linear approach, i.e., buying the product, using it and throwing it. We have adopted a 'use and throw culture.' "But if you look at our ancestors, we have always been a REUSE society". Even in our houses, we don't have the "throw" mind-set. This is necessary to be translated at a societal level and industrial level. "We need to bring our REPAIR CULTURE back".

Legislation plays a very important role too. We need proactive legislation that puts forth incentives and rules for industries. At an individual level, we need to be a conscious consumer, demand for longevity of products and slash out fast fashion trends from our practice. Circular economy is a mixture of interventions. We need policies, institutionalization, and consumer support to make this an integral part of our economy and daily life.

**Q: What are the main priorities and challenges you perceive in India with regards**



**to climate change? What gaps do you feel need to be worked upon while policy formulations?**

When we speak about India, we talk a lot about mitigations. Now we need to address adaptation. Knowing that climate change is hitting us in the form of several extreme weather events, we need to look at resilience. Are our communities or occupations resilient to climate shocks? We saw during the pandemic, so many occupations were not resilient to the shock. Along with infrastructure resilience, social and economic resilience is required: do we have the finance to cope with the disasters? India is very far ahead in terms of renewable energy targets. But the issue is that the finance needed for adaptation/mitigation activities by developing countries is poorly available. We have this discussion at each COP: the developed countries have a responsibility to pass on technology and funds to the developing countries. Historically, per capita emissions are very low for most of the developing countries, yet they are the ones suffering. This concern of equity comes up every year in these climate change conferences. It is very important to maintain the pressure as a developing country lobby

group. To summarize, we need to focus more on resilience and biodiversity and ecology conversation. We need to focus on building more green lands in our rapidly urbanizing cities, which is another challenge.

**Q: Your sustainability journey began in 2009 when you were selected as Climate change Champion by the British Council. What piqued your interest in this field and made you build your career in it?**

During my bachelor's in journalism from Delhi University, I had this course on Environment journalism, development communication. Back then climate change was a new term, so the idea of the British Council was to create awareness by youth led movements at a local level. I applied and got selected. I took up composting and came across this initiative called Daily Dump, promoting urban composting at home. Then I came across TERI SAS and was fortunate that they had just launched a program on Sustainable Development Practice and ours was the first batch.



## CLIMATE-RESILIENT VILLAGES: A POLICY TRANSFORMATION

In India, several individuals have risen against exploitation and destruction of the environment that has, in turn, brought a transformation in national policies. Some notable examples include - The Narmada Bachao Movement, The Chipko Movement, and the Ganga Pollution Case (petitioned by M.C. Mehta). With the help of national institutions like the

National Green Tribunal, legislations like The Environment (Protection) Act, 1986, Air (Prevention and Control of Pollution) Act (1981), India has redirected considerable resources and attention to making environmental degradation, climate change, pollution and resource-exploitation a significant facet of public discourse. However, for tangible results to materialize - structural changes and a transition to stricter punitive consequences for violators is needed.

Moreover, in India's scenario, the action plans are not being implemented at the state level, nor are the analysis and research required to prepare those plans, being materialized at the state level. The way forward for India is to apply a bottom-top approach and focus on making the panchayat climate resilient. Experts have pointed out how several climate change-related disasters (including floods and droughts) could be mitigated by making the Gram Panchayats climate-resilient. There is a need to prepare a climate-resilient adaptation plan at the village level. The government's programs such as MNREGA can prove to be effective in making the Indian villages climate-resilient.

# India and UNFCCC: PAST ACHIEVEMENTS AND FUTURE GOALS

India's engagement with the global environmental discourse goes back to Indira Gandhi's speech at the Stockholm Conference in 1972 where she said, "Poverty is the greatest polluter". She did away with the then existing sentiment that sustainable development and economic growth did not go hand in hand but were two sides of the same coin. This is a stance India holds to this day, emphasizing how India's carbon emissions are far less than that of the so called developed countries when they were at a similar stage of economic growth. Since the Earth Summit in 1992, India has led the way in uniting the global south to make sure that the industrialized countries took the initiative to decrease their emissions.

Ever since the 1st COP session in Berlin, 1995, throughout the years India has significantly improved its standpoint on the objectives of the conference, emphasizing on climate justice, promoting international cooperation and reinforcing global sustainability. Being a member of the *Convention on Biological Diversity (CBD)*, India introduced its first National Biodiversity Action Plan (NBAP) to put its commitments under the CBD into practice, followed by the enactment of the *Biological Diversity Act (BDA)* in 2002.

A signatory to the Paris Agreement of 2015, India is committed to accomplishing its Nationally Determined Contributions (NDCs) with regard to climate change regulation and the associated economic growth. In COP 20, India's position was based on the principles of CBDR and equity, calling for aggregation of all the INDCs in ascertaining the global goal of containing temperature rise by 2°C by the end of the century.



**Environment Minister Dr. Harsh Vardhan inaugurating the OSOWOG Theme at COP24**

With respect to international cooperation, India and France launched the International Solar Alliance during the Paris Agreement in 2015, aiming to promote solar power globally by 2030 and also laying out its ambitious OSOWOG (One Sun, One World and One Grid) Project in establishing an abundant supply of solar energy across different time zones.

Co-creating the Leadership Group for Industry Transition has given India the necessary push to achieve net zero carbon emissions by 2050.

Already being an important international stakeholder towards a low carbon future, India is on the right path in achieving its NDCs and meeting the Paris Agreement targets in the foreseeable future.



**Q: GYBN has mobilized youth from across the globe, with 614 member organizations and more than 664,000 members from 140 countries. What inspired you to start a network like this?**

I do not come from a family of environmentalists or a city that is very environment friendly. I am from West Germany, which is the most industrialized region of the country. However, I was fortunate enough to grow up near a forest, where I used to play as a child. I think that was a contributing factor towards my love for the ecosystem. I grew fond of it and wanted to learn more about it. So I started making an inventory of all the different species in the forest, and by the age of 14, I was aware of a lot of things related to the same. I finished my business degree, but then I got an internship with an environmental NGO. There I got introduced to various International UN conferences. Through this process I realized that there is a whole ecosystem of environmental organizations in Germany. I started contacting them one by one, and got invited to a meeting where I had my first experience. Back in 2010, I was attending an International conference. At that point of time, there was no definite structure regarding the participation of youth in Biodiversity. I discussed with my peers that nothing was actually coming out of these meetings and some concrete steps must be taken. We had no plan of action, or any strategy, and had no idea how it had to be done. We just started GYBN, went along with the flow, and here we are, 10 years later, with 614 member organizations.

**Q: We would like to know from you what the decision making process at the CBD COP is like.**

The CBD is an International Convention that 196 countries are a part of. There is a Secretariat based in Montreal in Canada that administers the entire process. Every 2-5 years, the governments that are a part of the CBD agree on a multiyear programme of work that determines the topics that the convention would focus on, in the next couple of years. According to the topics that have been elected, the CBD Secretariat then prepares 'notifications' or emails that are then sent to the focal points, who are the contact persons of all the 196 parties. In these notifications, the CBD Secretariat would then list a particular issue. The parties are then asked to provide information on the same, the challenges that they are facing, how well funded the issue is etc. and then

# IN DIALOGUE WITH

## Christian Schwarzer Global Youth Biodiversity Network



*Christian is one of the founders of GYBN and has dedicated most of his life towards environmental issues. In recognition of his activities on Biodiversity, he has been appointed as Youth Ambassador for the UN Decade on Biodiversity. He is a member of NAJU and Co-Chair of Germany's NGO working group on Biodiversity policy. So far he has participated in more than 21 rounds of UN negotiations under the UNFCCC, IPBES and the CBD and published numerous articles and studies on environmental policy issues.*

based on this information that the Secretariat receives from all the 196 parties, it then summarizes the different viewpoints. This becomes quite challenging as there are so many countries with different issues. The CBD then prepares another notification, in which they send the first draft of this document. All the governments comment on it. Once this is done, the CBD then releases the document as a draft. We have two subsidiary bodies in the CBD. These are the advisory bodies to the convention, where all the representatives of the parties meet on an annual basis. During these meetings, they discuss and advice on the final version of the documents. Once they have agreed on the documents, they are then finalized. Usually, 90-95% of all topics are finalized and then sent to the COP meeting. The COP meeting is the highest decision making body of the CBD. At the COP meetings, we negotiate the operational parts of these decisions, which are valid for all governments that have signed up through the CBD. The governments are usually not negotiating by themselves. We have groups of governments that join forces, as they have similar interests. The meetings are therefore dedicated to finding a common ground and thus reaching a consensus on the adopted text.

**Q: How has the role of the youth progressed in the CBD negotiations? Where is the gap?**

I have been following the CBD since 2008 and I noticed that there was no youth participation, but over the last few years, there has been a massive change. When we created the GYBN, it was just a small platform for young people to participate and share their views. During the initial few years, there was an issue of funds to bring people into the network. However, as the network grew, we have become financially stable to support young people's participation and have developed a whole new program for youth delegate participation. Recognition of young people should be part of the conversation. We're really working aside with the governments, and we are recognized as a group that should be listened to. Right now, our focus is to establish the principle of intergenerational equity on the global biodiversity framework. We want to make sure that young people are not only being engaged, but also work side by side with members of all other generations while biodiversity policies are implemented on the ground.

**Q: The idea of inclusivity in terms of representation, and getting the public access to this decision making process is very important. When we talk about biodiversity, we are talking about the entire planet. These decisions are implemented across the world. Are these decisions always reflective of the needs across the world ?**

I am fascinated by the international community, trying to make an effort to protect biodiversity. Despite the progress, we see out of these meetings, it is not in line with the scientific information we have. COPs are certainly a very important place for coordination for governments to enter into dialogue with each other, but I think there are differences between climate and biodiversity.

Climate requires the big polluters, the big companies and governments to put in laws and regulations, ensuring that we curb emissions, and this needs to be done at a top level. When it comes to biodiversity, it's much more important that we take decisions on every level, as it is something that you can start in your backyard. Protecting biodiversity is something that requires action by local municipalities and education boards. All these things can happen independent of COP. We want countries to work together and take action.

The biggest problem is that the people attending these meetings, especially in the UNFCCC, are usually bureaucrats, working at high positions in a ministry, usually not with a background in wildlife biology or work experience with local communities and indigenous people.

We need more people from the local level in these conferences to wake us up, to tell us if the plans and strategies that we're adopting for the whole world are really reflecting the realities on the ground. Reforming the negotiation process is very important but I don't think it's going to happen anytime soon as it requires the consensus of 196 countries. That brings me to the next point, which is that a consensus decision is the way forward.

**Q: COVID has created another barrier in terms of inclusivity and representation itself right. How can we overcome this, and ensure we base our decisions on reality?**

Hosting COP meetings in a country that requires visa that are very expensive, in the midst of a pandemic is not the right way to go. It results in a lot of inaccessibility. What is the point of having a COP meeting, if a person in a village in India who's doing fantastic work on biodiversity will not have the funds to travel and get the visa? We need more local COPs in the form of local meetings, local decisions on the municipal, state level.

Moreover, if you're at a conference with thousands of people, it is impossible to take all the COVID measures seriously. Virtual negotiations, unfortunately, don't work as well. The internet connections are unequally distributed, one might have bad internet or power outages. But again, I don't think we can have these meetings at the moment. I also hope vaccines are being distributed equally. And, once everybody can participate in COP meetings, we should start the process again, but it needs to be possible for every country to send representatives. This is really important.

**"We need more people from the local level in these conferences to wake us up, to tell us if the plans and strategies that we're adopting for the whole world are really reflecting the realities on the ground."**



**Q: Recently, COP15 to the CBD happened, could you please share some highlights for our readers?**

What happened last week (during Part 1 of the Convention) is a couple of important things. As I mentioned that there is a CBD Secretariat, and the Secretariat has 100-150 employees who need to be paid. For this, you need to have a budget, and the budget is provided by all the member states of the CBD, according to the respective GDP and so on. So, extending this budget and agreeing on the new budget for the next 2 years, was one of the things they discussed.

The second thing they wanted to do is that, whenever there is a COP meeting, we have one country that is coordinating the process. We call this the COP Presidency and it is usually the country who is the host of the meeting- so, Egypt (as the President) when it happened in Egypt; when in Mexico, the President was Mexico, and so on. The next COP is going to happen in China but since the previous meeting didn't happen, the COP Presidency was still with Egypt. So that is the second that happened, that is, the handover of the Presidency to China. There is a recognition of the important role indigenous people, women, and youth can play in conserving biodiversity.

The final thing that happened was that China made many very positive announcements, the most important of these announcements being, from my point of view, the declaration to adopt a Kunming Fund for Biodiversity by the Govt. of China. What I do not know is how this fund is going to be used. Is it an annual budget? Is it for 10 years? Will it go to civil society organizations? Will it go to other governments? Will it go to the governments China likes? We do not know.

**Q: For most, biodiversity is not the first thing that pops up when there is talk of climate change. How do we make people understand the importance of biodiversity?**

I do not think that there is a general recipe. The way biodiversity is perceived differs from country to country, culture to culture, and also from what part of society one belongs to. The people living in the cities are so disconnected from nature- when we want food we just go to the nearby supermarket and barely go to the fields and harvest it ourselves, and this is why I believe people do not care about biodiversity. The other problem is how our governments are focusing on biodiversity. Many countries' focus wholly lies on the economy and how to provide better

lives to the people, which is completely justified, but we have to see that all our livelihoods are based on biodiversity, the economy would not work without it. We need to change this narrative. I believe we need to reconnect people with nature and we are doing it by including information on biodiversity in our curriculums, by taking classes out to the forests, meeting indigenous people and learning from them how biodiversity has been preserved for centuries, how our cultures have been dominated by (narratives of) biodiversity.

**Q: Would you like to share any suggestions that we can all imbibe in our lives, to be able to work towards biodiversity?**

The first thing you could do right after this meeting is go to your parents, your siblings and talk to them about biodiversity. Ask them, what role biodiversity is playing in their life? If they remember a nice moment as a child when they were playing in the forest? Why don't they care about biodiversity? Is it because everybody's so busy? Talking about it in our close circles is the first step. Then, if you have more time, go out, try to bring your friends together, do some gardening, go to the forest together, and try to learn about biodiversity, the indigenous people in your community, try to get in touch with local NGOs. Check if they have a volunteer activity related to biodiversity. These things can be done at a personal level, whereas COPs are something which work on a national level. Finally, biodiversity conservation and political engagement should go together, so, try to check out when you have the next election, which party is doing something about biodiversity and enquire about the actions they are taking.

**Q: We have not made enough progress that we need, and this has to do with the process itself and the fact that the process is not working. How can we ensure we go through the right process, which is unfortunately not happening?**

The one thing that I can tell you is, this is a big thing that we're trying to do. Here, what you have to do is to accept the slowness of this process. My advice for you would be, don't expect one COP meeting or five meetings to change something. If you really want to change something, then, this is something that you have to dedicate your life to.

*"We want to make sure that young people are not only being engaged, but also work side by side with members of all other generations while biodiversity policies are implemented on the ground."*

*CYBN closing statement at the CBD COP14 in Egypt, 2018*



# Islands of Uncertainty:

## THE DISPROPORTIONATE IMPACT OF CLIMATE CHANGE

The term "climate justice" has been in vogue for decades now and it revolves around the varying impacts of climate change around the world. Needless to say, island states are dealing with these adverse impacts despite being far behind in terms of emissions. In global forums, the pertinent stake of small island developing states (SIDS) was acknowledged in 1990 with the formation of AOSIS. In a nutshell, the demand was to recognise this subgroup while forming climate policies.

However, the same challenges are also being faced by coastal areas across the world. **Thus, adaptive practices will need to be adopted across the world.** India's case is no different as with its vast coastline and islands, many of its citizens face an increased threat of climate change. Furthermore, as confirmed by the latest IPCC report, there is also an increasing risk of natural disasters such as cyclones in these regions aside from the ever-present fear of inundation. **In order to adapt at a quicker pace though, provision of funds is still lacking, especially for more remote regions or countries which are not primarily islands.** The economy of islands has also taken a massive hit in recent times due to the pandemic that affected tourism which more often than not is a major revenue source.

In India, the case of Andamans and Lakshadweep are often cited but in this article, we will explore the case of a lesser known island in crisis- **Ghoramara Island.**

Ghoramara island, known as the 'sinking island' located in the Sunderban delta complex of Bay of Bengal in Eastern India is facing the dual crisis of sea level rise and the resultant climate induced migration. The drastic reduction in the size of the archipelago from 8.51 sq kms in 1975 to 4.43 sq kms in 2012 indicates extensive soil erosion on account of human interventions and sea level rise. The constant need to rebuild collapsed houses on account of flooding, lack of basic infrastructural facilities and job opportunities has led to increased migration of the inhabitants to the mainland region and other nearby islands like GangaSagar island. Due to the high plausibility of inundation of the Sundarban islands, the emergence of climate refugees or Internally Displaced People (IDPs) might become the 'new normal' in the future for which India does not have a policy or legal framework, thus putting the lives and livelihoods of several thousands of inhabitants at severe risk. Further, the destruction of mangrove forests to accommodate human settlements in the delta has intensified the damage inflicted upon the already fragile ecosystem. The increasing occurrences of climate induced disasters like cyclones have also put a strain in the ecosystem. The rapidly disappearing habitat and dwindling livelihoods of the coastal communities in the Sunderbans highlight a sense of urgency in addressing the climate crisis of small islands in India. The fate which befell the 'disappeared islands' of Locchara and New Moore in 2006 and 2011 respectively is an ugly reminder to protect the existing Sunderban islands at any cost.





# Species at the Frontline

## BIODIVERSITY FOR CLIMATE CHANGE

**The fundamentals of life on Earth include healthy ecosystems and rich biodiversity. Both of these are equally affected by climate change. The forum which looks after these is COP - Conference of the Parties.**

### COP 15

The COP under the CBD (Convention on Biological Diversity) was originally signed at the Rio Earth Summit in 1992 to protect the biodiversity of the species on earth and ensure the sustainable use of the available natural resources. COP 15 will take place in two parts: a virtual format from October 11 to 15, 2021, and an in-person event from April 25 to May 8, 2020. Among the agenda items for COP 15 is the conclusion of negotiations on a post-2020 global biodiversity framework.

### COP 26

The 2021 United Nations Climate Change Conference (COP26) is scheduled to be held in the city of Glasgow, Scotland between 31st October and 12th November, 2021, under the presidency of the United Kingdom. It is a credibility test for global efforts to address climate change, where Parties must make considerable progress to reach consensus on issues they have been discussing for several years. Climate change and biodiversity are interconnected. Not only does climate change have adverse effects on biodiversity, changes in biodiversity lead to changes in climate change. The CBD has considered a number of decisions on biodiversity and climate change, including formation of an Ad Hoc Technical Expert Group (AHTEG), in 2001, to work on the correlation between climate change and biodiversity.



Photograph by  
Ananya Pandey, MSc Economics

Now, considering the aforementioned COPs, synergistic targets with benefits for both COP15 and COP26 commitments would maximize positive outcomes.

Climate change and biodiversity, both hold a position of equal importance. But, while climate change has captured public attention and has gained international political recognition, biodiversity restoration and protection has barely caught any eyes on it. Climate change is a very vulnerable and complex phenomenon, hence it is important to consider all the factors affecting climate change, including biodiversity. Below, we have explored how restoring and protecting biodiversity can help us generate positive effects on climate change.

### TACKLING CLIMATE CHANGE

#### THROUGH BIODIVERSITY

One of the best ways to fight climate change is to let the many species do their very own task. Many researchers, all across the world, believe that along with multiple other problems, restoring biodiversity can be used to tackle the problem of climate change. Following this belief, multiple researches have been initiated globally.

Some of the examples include the classic case of Yellowstone National Park, the research on recreating Woolly mammoth, etc. One can come across such initiatives in India as well (for example: research on restoring Indian rainforests).

### BANGALORE LAKES: SERVING A BUSY MODERN CITY

Bangalore has multiple chains of lakes, which have been serving the whole city since ages. Harini Nagendra, a Bangalore based ecologist, along with her many colleagues, has been working on restoring the lake ecosystems of the city, trying to create a better future for the city. The long term, climate change driven project, involves a collective effort of different researchers along with the locals. The idea of cleaning the many chains of lakes (including restoring biodiversity) is highly influenced by the glorious past of the city. Different cities offer different solutions to the problem of climate change and lakes could be a solution for Bangalore. Such an initiative, when successful, has the potential to set a tremendous example for the country.



### CONCLUSION:

#### THE LONG TERM INITIATIVE

Neither restoring biodiversity nor analysing its effects on climate change can happen in a fortnight. It, indeed, is a long term process. Although the above provided examples are not enough to fight climate change, they provide adequate information on how successful initiatives can help restore biodiversity, which in turn can help us tackle the problem of climate change.

### MANAGING "THE WAR": The Marvelous Journey of Gorongosa National Park, Mozambique

After the civil war in Mozambique (1990), Gorongosa National park was shattered, losing approximately 95% of all its native species. Greg Carr, an American philanthropist, on his visit to the park, saw the potential of it turning into one of the world's best. Under his supervision, the project of restoring biodiversity of the park started in 2008.

The process took place through various measures, involving multiple researchers and the local people of Mozambique. Today, the main motive to restore and maintain the park diversity is driven by the very concerning process of climate change.





# THE SOUTH SCENARIO

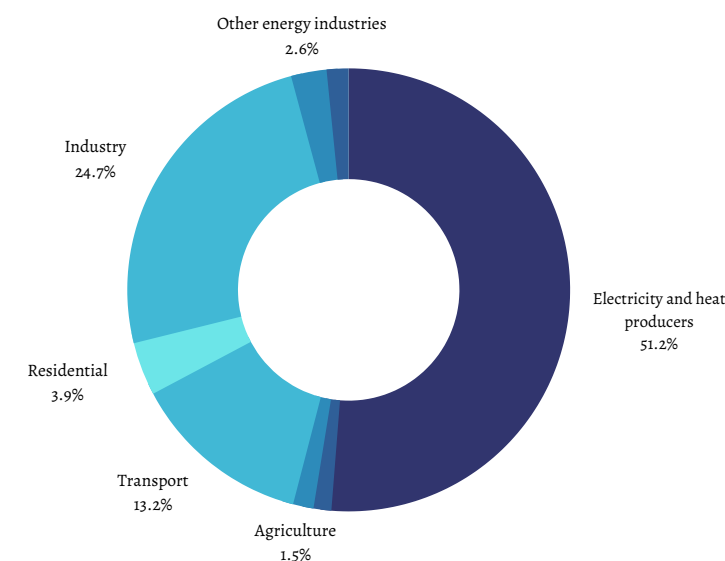
With Amphan, Yaas and now approaching Gulab, Bay of Bengal has become a hub for cyclones. The capital of India is experiencing heat related mortality with excessive smog and mountains of waste making lives miserable. Mumbai experiences deluge now and then and people in Chennai beg for rain.

The Tata Centre for Development at Chicago estimates that by 2100, around 1.5 million more people could die in India each year due to climate change. By 2050 Indian cities like Mumbai and Kolkata are likely to be underwater. India is already experiencing a warmer climate and since the 1950's there has been a decline in monsoon rainfall and an increase in the frequency of sudden heavy rainfalls. An abrupt change in rainfall patterns can trigger frequent droughts and greater flooding. With loss of biodiversity and a threat to human lives along with decreased efficiency in productivity all the efforts of economic growth will be in vain.

Development along with fighting climate change is a major challenge for developing countries like India.

With India being the 2nd most populous country in the world, ensuring food for all, providing employment, fighting poverty, ensuring education, and providing access to health care remains the priority. With climate change as an additional and major challenge India often faces a financial crunch. Lack of technological know-how to support minimum development programs in such situations makes it cumbersome for adaptation and mitigation of various environmental policies.

Regardless of the huge population, India's per capita greenhouse gas emissions are only a fraction of the world's average. Right from the 5th Five Year Plan, India gave due importance to Environment Protection. The 1972 United Nations Conference on the Environment in Stockholm was a landmark event in the history of environment conscious actions which paved the way for considering the environment as a major issue. The conference was one of a kind in the sense that it was the first such gathering that highlighted the impacts of humans on the environment and to come up with possible solutions to mitigate the same. International



Source- CO2 Emissions from Fuel Combustion, IEA 2021

events like these in turn triggered actions in India that started having environmental issues at the forefront of discussions. In fact, it is post 1972 that environmental laws gained shape in our country.

The Ramsar Convention on Wetlands of International Importance (1971), Paris Agreement (2015) under the UNFCCC, Clean Development Mechanism, Coalition for Disaster-Resilient Infrastructure (2019) supported by the UNDRR are some of the prominent agreements ratified by India at international level. Likewise, at national level the country has initiated the National Action Plan for Climate Change in 2009 under which missions like National Solar Mission, National Water Mission, National Mission for Sustainable Agriculture to name a few are being implemented. India has an ambitious renewable energy target but it still houses some of the most polluting coal power plants in the world. Thus it is vital that India decarbonizes its energy sector to remain compliant with the goals set under the Paris Agreement. In 2021,

India's emission intensity, which is a measure of the increased emissions per unit of GDP, has been declining at a rate of 1-2% annually, as per GOI submissions to the UNFCCC.

According to this analysis, India is on track to meet its NDC (33-35 % reduction by 2030), which it has defined not in terms of absolute reduction in GHG emission but in terms of how much it will reduce emissions intensity as it grows economically. However, the rate of growth in sectoral emissions is increasing and there could be a situation where the reduction in terms of intensity may start to decline.

The principle "common but differentiated responsibilities" is very crucial for developing countries like India as it emphasizes the need to demand greater climate conscious actions from developed countries who have been the greatest historical polluters. Weighing every country on the same scale would be unfair owing to the huge discrepancy in the global carbon share. Yet, the fact that India should take necessary actions and initiatives in this regard does not get overruled. Capacity building through training, outreach and awareness programs, inclusive policy making and protecting the interests of the stakeholders involved could all be considered a way forward for India.



# INDIA'S BREAKTHROUGH TOWARDS FIGHTING

# Climate Change

**F**or a country as dynamic as India, be it the humongous population size or the tropical weather, it needed the most awaited domestic dimension to its policies on climate change. As a result, India adopted NAPCC on June 30th, 2008. It has been articulated in a manner to establish linkages between adaptation and mitigation.

## National Action Plan on Climate Change (NAPCC)

It envisages pro-active, multipronged, long term and integrated strategies for achieving key goals in an ecologically sustainable manner. The NAPCC comprises India's response to global climate change based on its national resources but also recognizes that it is intimately linked to the contemporary global efforts, based on the principles and frameworks of the UNFCCC, to establish a global Climate Change regime.

The principal focus area is on promoting the understanding of climate change, adaptation and mitigation, energy efficiency and natural resource conservation alongside the inclusion of marginalized people and rural population. It also lines up to pave the way to multiple and heavily capitalized global and local R&D programs that can aid in devising efficient and cost-effective strategies for end use Demand Side Management. NAPCC holds a firm belief that a global approach to equity allows each inhabitant of the earth an equal entitlement to the global available resource.

In 2009, the Indian government required all state governments and union territories to develop State Action Plans on Climate Change (SAPCC), in line with the National Action Plan on Climate Change's strategy (NAPCC).

## NATIONALLY DETERMINED COMMITMENTS (NDCS)

*India has also rolled out three NDCs in prelude to Paris Agreement on 2nd Oct, 2015 to UNFCCC. Those include:*

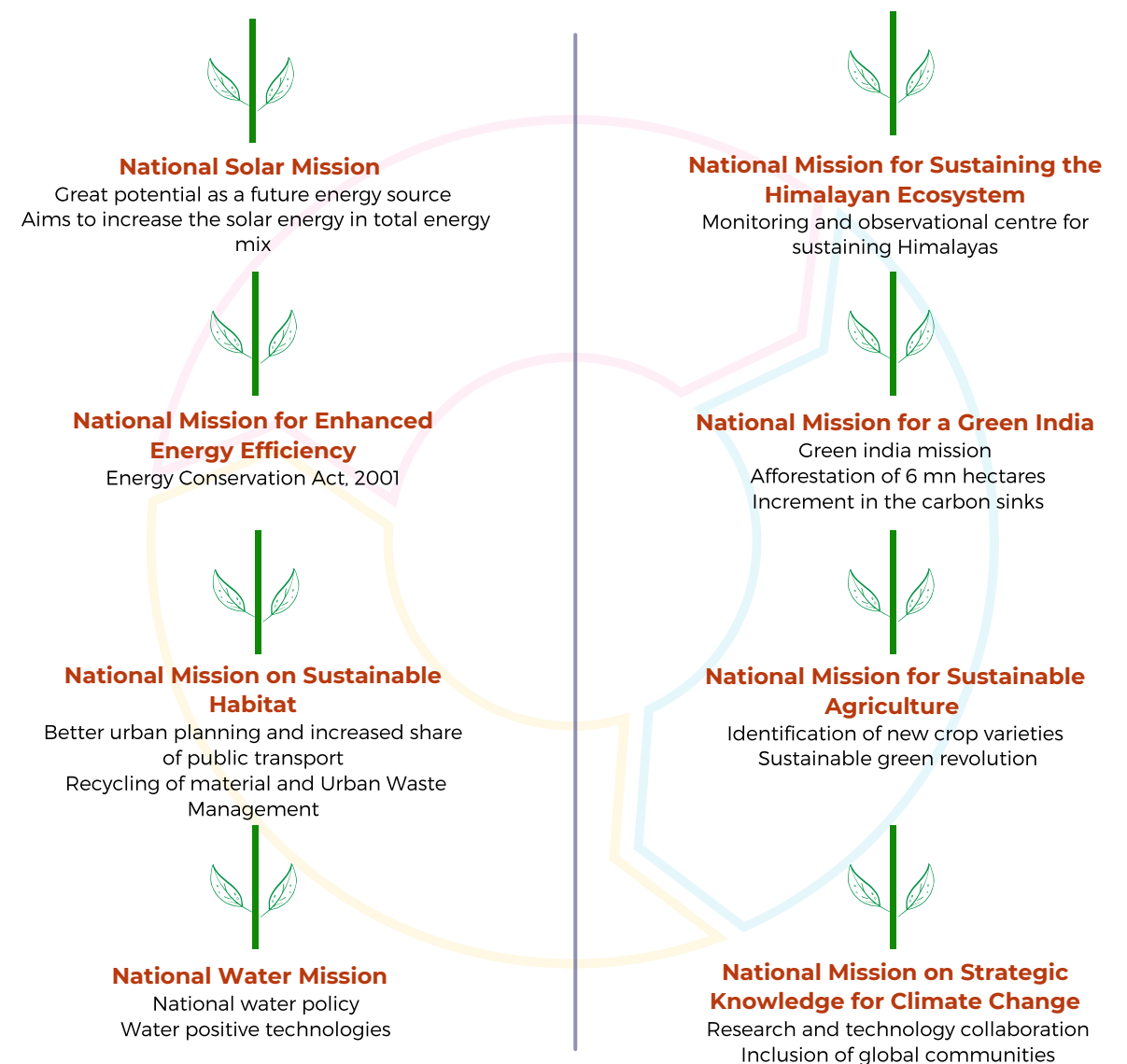
**To reduce the emissions intensity of its GDP by**  
**33 - 35 %**  
**by 2030 from 2005 level.**

**To create an additional carbon sink of**  
**3 billion tonnes**  
**of CO2 equivalent through additional forest and tree cover by 2030.**

**To achieve about**  
**40 %** *cumulative electric power installed capacity*  
**from non-fossil fuel based energy resources by 2030.**

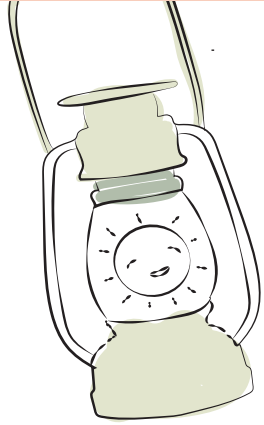
## 8 NATIONAL MISSIONS

*The core of NAPCC are the eight national missions that have been outlaid to act on several fronts in a focussed manner simultaneously. These include:*





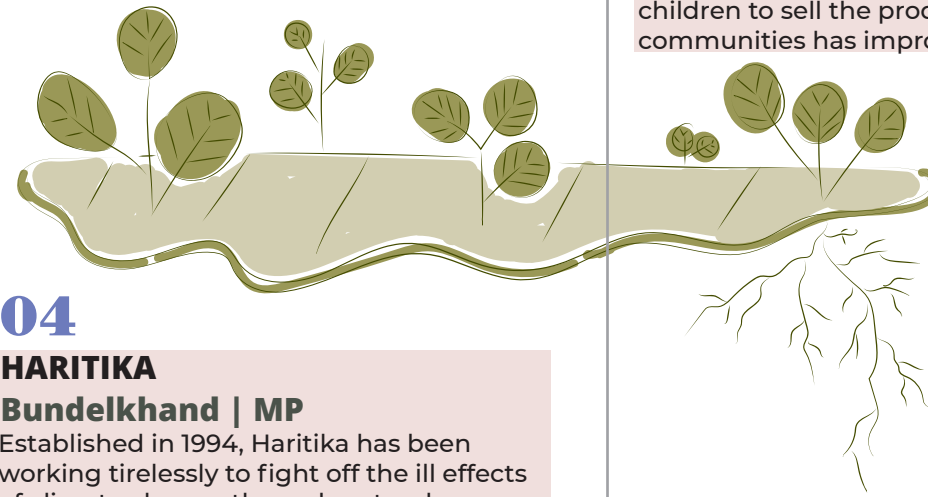
# VOCAL for LOCAL



01

## BALAJEE SEWA SANSTHAAN Dehradun

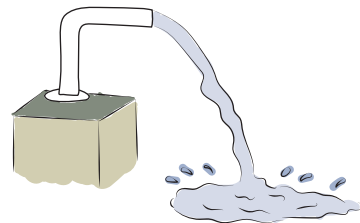
Balajee Sewa Sansthan was founded at Dehradun in 2002 to actively create awareness about clean water for consumption and sanitation. The non-governmental organization has been immensely vocal about climate change hazards and bringing about the use of solar energy, a weapon in the fight for sustainability. Their efforts involve promoting smokeless stoves and solar lanterns in the state.



04

## HARITIKA Bundelkhand | MP

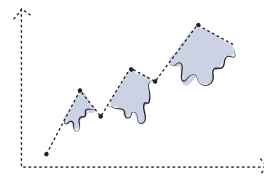
Established in 1994, Haritika has been working tirelessly to fight off the ill effects of climate change through natural resource management and raising the living standards of locals. Initiatives taken by them include water harvesting, optimizing agricultural techniques, soil conservation and raising a firm voice against deforestation.



05

## VASUDHA New Delhi

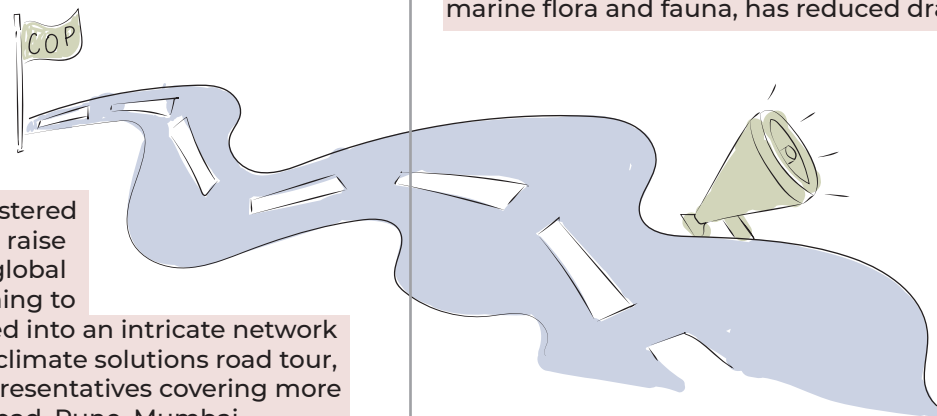
Vasudha, a think tank with the motto, "Green ways for a good Earth" was established in Delhi with the sole purpose of saving our home planet. Their approach is based on data driven analysis, creation of repositories with cross-sectoral analysis, along with outreach to ensure resource conservation.



06

## INDIA YOUTH CLIMATE NETWORK Pan India

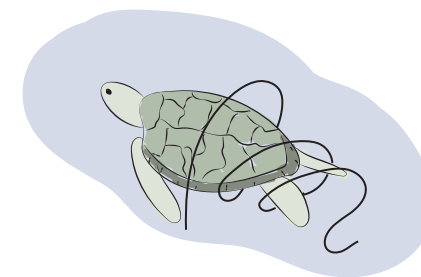
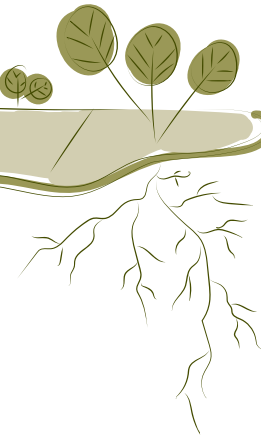
IYCN, a youth organization registered as a small scale NGO in 2009 to raise the voice of Indian youth on a global platform about matters pertaining to climate change has now evolved into an intricate network with offices in 6 locations. The climate solutions road tour, a INYC initiative involved 10 representatives covering more than 15 cities including Hyderabad, Pune, Mumbai, Ahmedabad, Jaipur and Delhi in solar powered vehicles and electric cars, REVA. Other projects include the Climate Leadership Program and the Rural Energy Project.



07

## FARM2FOOD Assam

A non-profit social enterprise, Farm2Food provides tools to communities to take up sustainable farming practices. Through its 'Farm Preneur' program, Farm2Food works with school students to build nutrition gardens in schools itself, equipping them with the understanding of organic farming and nutrition in their early years. Enabling children to sell the produce (such as vermi-compost) locally, investment in education and nutrition in the involved communities has improved.



09

## KADAI OSAL 90.4 FM Ramananthapuram | Tamil Nadu

India's only community radio for fishermen, Kadal Osai has revolutionised the fishing practices of Ramananthapuram's Pamban Island's fishing communities. Set up by Armstrong Fernando, a fisherman himself, in 2016, the radio provides guidance on sustainable fishing practices, as well as reports stories and events from the local fisherfolk. Notably, with the radio relaying such information, the number of sea turtles being caught by the fishermen, impact of which is detrimental to local marine flora and fauna, has reduced drastically.

08

## VANI MURTHY AKA WORMRANI Bengaluru

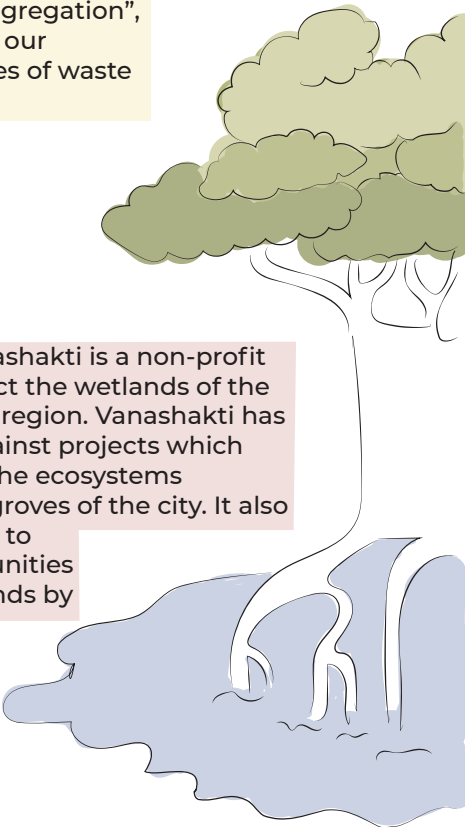
Immensely popular on Instagram as Wormrani for her videos showcasing the circular nature and reusability of our house waste, Vani started her waste management journey in 2008. She co-founded the Solid Waste Management Round Table to improve public health by creating awareness on waste management. Her work has inspired hundreds of residents of her area of residence and beyond to take a more holistic approach when handling waste. "Our efforts broke this pattern and decentralised the process of garbage segregation", she says. "Many residents who signed up for our initiative no longer hand over huge quantities of waste to municipal staff."



10

## VANASHAKTI Mumbai

Founded in 2006, Vanashakti is a non-profit NGO working to protect the wetlands of the Mumbai metropolitan region. Vanashakti has actively advocated against projects which have sought to harm the ecosystems surrounding the mangroves of the city. It also fights for social justice to the vulnerable communities dwelling on the wetlands by involving them in the conservation projects, helping them to provide sustainable means of livelihood.



11

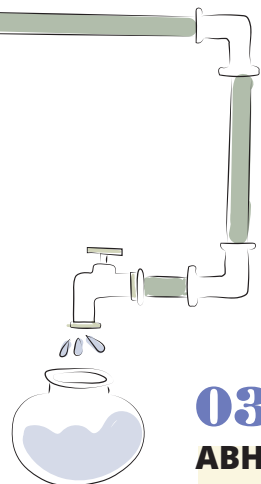
## BLUSMART MOBILITY Delhi-NCR

An all-electric mobility platform, BluSmart is a pioneering initiative in India, with ride-hailing, car-sharing, and shared charging- all services being served on a single platform. Currently serving in selected areas of Delhi-NCR, the initiative is providing a more sustainable alternative for commuting. Along with 500 all-electric ride-sharing cars across the national capital, it aims to add 2,500 chargers to its platform, to be available for both BluSmart cabs and private vehicles, by 2021.

03

## ABHINAV Muzaffarnagar | UP

Abhinav, an NGO aimed at adapting towards climate change, works towards spreading awareness about clean drinking water and sanitation in villages and effective management of waste.







## IN CONVERSATION WITH Ms. Divya Sharma

# CLIMATE GROUP

*Divya Sharma is an International climate and urban development expert, specialising in climate resilience and urban development planning with almost 20 years' experience operating throughout India and internationally. She is on a number of prestigious advisory positions on international and national networks for sustainable development, as well as international and national level climate change.*

**Q: How do you think that a country like India can take climate action while coping with the pandemic simultaneously?**

A lot that needs to be done in terms of coping with the pandemic and recovering from it, particularly financial recovery, development recovery; putting together health systems, moving forward in terms of GDP growth. It is also a big disruption in India's climate actions and its commitments. When looking at the GHG emissions reduction, mitigation and adaptation, India has been one of those few countries who achieved their target of 2°C compliance. We also have big targets for achieving a global energy mix.

However, we need to understand this in the wider perspective of our own context around what needs to be done, how, and why. We can make huge international commitments, likable to International Politics. But achieving those targets, looking at our present development needs and sectors that need attention like health, urban development, water resources, disaster risk reduction or adaptation, will need internal prioritizing. So not denying the fact that we have a huge role to play in climate mitigation, we also have to prioritize adaptation to the extreme events around our coastline and land area that impact agriculture. These are not small problems and I think our ambition to combat climate change as a country should not go down. The damage that India could face because of a disaster is unprecedented because of the scale. It has always taken long for our economy to bounce back to recovery even if it's a cyclone like Hudhud or Nargis. We may have a stand on whether we are answerable to the international community or not and that is completely a prerogative of the Indian Government. But as a CSO working in this field, I feel that the most important thing is that we should not shy away from saying that our ambition and commitment is intact. How we deal with it is a different story and is a domestic matter.

**Q: What role do you think individuals can play in academia and how can they contribute to climate action within the country?**

Academia has a great role to play because they are a channel to what climate science dictates and how it is communicated to students, to researchers, to early practitioners and communities in India. The science interpretation to action, what needs to be done, what are those social, political dimensions to climate science that help us prepare our action plans, development regulations, goals, and policies, come from academia.

The other important role that academia plays is in the capacity building of the students who are learning climate science and ways to deal with its impacts. Secondly, enforces capacity building of the practitioner itself. I have worked very closely with TERI SAS to conduct some of these capacity-building programs and have been using the GIS facility very extensively. Closely making detailed assessments on how climate science will impact, for example, assessment of Guwahati's plant was prepared in conjunction with TERI as well as TERI SCHOOL OF ADVANCED STUDIES. Universities and academicians have the time measured resources and in-depth knowledge and tools to make these difficult signs into digestible, thumb rules policies/inputs for use by decision-makers, CSOs, and consultants. Individuals on the other end could use this information to build capacities, convene thought leadership around what needs to be done, be part of larger networks, create partnerships to scale up the work that needs to be done. At Climate Group, we work very closely with large businesses because they play a big role in the decarbonization of industries. They have a great role to play not only in financing climate action but also working hand in hand with the government and ensuring that the roadmaps are implemented. For example, transition to electric vehicles, energy productivity in India's industrial operations, and transitioning to renewable energy or creating demand for renewable energy. Lastly, behavioral change- all these demands for greener technologies, sustainable products will only be met when individuals make these commitments and choices. Market and demand creation is something that individuals can work towards.

**Q: Do you think the Indian cities, more specifically the urban areas are on the right path to achieving resilience? What methods can they apply to improve themselves?**

No, I don't think they are on the path of achieving resilience. Earlier, cities were growing inorganically, land use planning was failing, development regulations were not adhered to, and urban local bodies did not have financial independence. Neither did they have policy-related independence. Then came the Jawaharlal Nehru Urban Renewal Mission, which was an infrastructure financing flagship scheme. A lot of change happened then. JNURM was not completely an unsuccessful scheme. It was to a large extent successful because it changed the way Urban Development was perceived in India. Until then, we thought that migration was bad, and we should control urbanization. But soon after JNURM, we realized that migration cannot be controlled. Urbanization is inevitable.

What is in our hand is to see that urbanization is

sustainable, our cities allow good quality of life and economic development. RURBAN (Urban and Rural) concepts were floated at that time. The more we match the dichotomy between urban and rural, the better it will be for people to make choices around migration. Why do they want to migrate? Should they migrate? What are the points which would help them to make this choice?

From there we drifted to smart cities, to make them technologically advanced, to provide quality of life, economic development and sustainability including climate resilience. Smart Cities scheme comes with that potential. However, we also need to know that the change in Indian urban development scenario has really been very slow historically and to expect the scheme to run for 5 years would completely transform urban systems in India may be a difficult target to achieve.

***"Resilience is much deeper than hard infrastructure. It is a thought process. It is about thinking more smartly around how we manage the complex Indian urban system."***

Urban systems in itself are very complex. Some of the Indian cities are equivalent to European countries in terms of their population or area. They are a government, an ecosystem in itself. One pan city project, one green field project, a few retrofit projects, and a few redevelopment projects cannot fix your city forever. Smart cities cannot be a onetime item. It is not a project. It is a movement. It should have been designed to be a movement. Five projects here and there would not make a difference in the city's quality of life or its economic development. We have done that since ages. So many flyovers are being built with or without smart cities, aren't they? But have they transformed the way traffic moves in the cities? No.

Resilience is much deeper than hard infrastructure. It is a thought process. It is about thinking more smartly around how we manage the complex Indian urban system. How do we manage inequality? How do we see that the new urban centres (metropolitan parts) of India do not become pockets of gated high class communities, completely alienating people who do not have access to most of the basic services, their rights? All these things taken together, the phase of Urban Development has a direct connection to resilience and how our cities and people will be impacted by climate vulnerability and disasters.



# COP26:

## DRAWBACKS IN AGENDA ITEMS AND PROPOSED ENHANCEMENTS



The 26th session of the conference of parties (COP26) is to take place on **October 31 to November 12, 2021**. The presidency programme, agenda items and related aspects have been decided. Undoubtedly, these matters of concern are decided by contemplative deliberation and thorough research work. **But do these items have certain limitations and drawbacks? Can they be made more effective?** This remains a matter of concern as opportunities for improvement are endless. Hence, there rises a need for introspection over these subjects. Let's first start from the broad overview of the presidency program of COP26 for the realization of key issues that are there for discussion:

### THE FIRST WEEK

October 31	Procedural Opening of Negotiations	
November 1	World Leaders Summit	<ul style="list-style-type: none"><li>Adapting to Protect Communities and Natural Habitats</li><li>Mobilizing the Finance</li></ul>
November 2	<ul style="list-style-type: none"><li>Global Net-Zero Emission</li><li>Keeping 1.5° in Reach</li></ul>	
November 3	Mobilizing Public and Private Finance	
November 4	Clean Energy	
November 5	Youth and Public Empowerment	
November 6	Ensuring Importance of Nature and Sustainable Land Use	

### THE SECOND WEEK

November 7	<b>Rest Day</b>	
November 8	<b>Delivering Practical Solutions to Adapt to the Damage Caused by Climate Change</b>	
November 9	<ul style="list-style-type: none"> <li>- Gender Equality</li> <li>- Demonstrating the Power of Science and Innovation for Action Against Climate Change</li> </ul>	
November 10	<b>Zero Emission Transport</b>	
November 11	<b>Regional Actions</b>	
November 12	<b>Closure of Negotiations</b>	

The Warsaw International Mechanism (WIM) is one of the key components of the agenda items for the Loss and Damage assessment of climate change. This mechanism displays certain drawbacks such as lack of non-recognition of accountability for advanced economies, no commitments to help low-income and developing islands, lack of common understanding of Loss and Damage among developed and developing countries, little focus on context-specific information for individual countries, etc. Further, geopolitics still seems to be playing a huge role, especially in the financing part where developed countries somewhat dominate the process of fund flows. Also, COPs have not been fully successful to fulfil their targets as per the commitments, instead of a 45% decline in the GHG emissions by 2030, we are about to observe an increase of 16% by 2030. This may be because the agenda and the functioning determined still lacks the provision of disciplinary actions, at least against the developed countries and huge economies for the unfulfillment of threshold targets. Given these points, the following enhancements may be considered:

- An increase in accountability of the developed countries may be prioritised.
- The knowledge development efforts may be scaled up in the WIM.
- The implementation part may be focused upon rather than intensifying theoretical discussions which might not be able to produce desirable results.
- Knowledge and resource development for the poor and developing countries may be further emphasized on a much larger scale.
- The contextual framework may be developed especially, for the vulnerable countries to serve them a tailored guide for their green development.
- Some advisory bodies may be developed for the noble purpose to whom countries may approach for green consultancy and related concerns.
- The system at COP may also pay high attention to the curbing of causal factors which may include identifying the hotspot emission regions and designing specific instructive guidelines for them.

Hence, it can be concluded that even when we are being seen as a progressive world towards sustainability, there is still a long way ahead to accomplish the desired goals that require improvements from the multi-perspective pathways.

## THE SHIFT IN THE ERA OF DEVELOPMENT

As the Post-war era surfaced, the polarization of power, strength and the North-South divide became crystal clear. As the so-called greater nations of the world marched down the road of the 'betterment of the world', the age of economic aids and rehabilitation - aided by diplomacy and geopolitical leverage began.

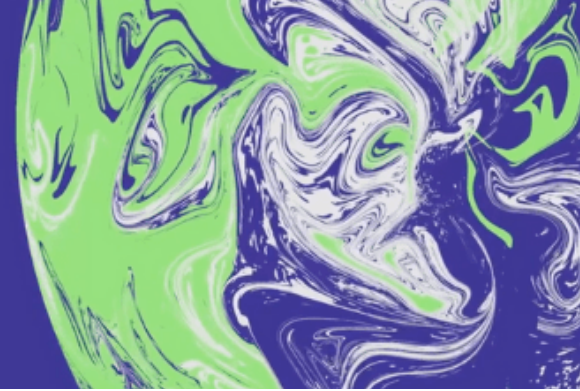
Soon the remaining nations from the other side of the globe recovered and began to function at par with their contemporaries. Consequently, a call for a coalition of the Third World was promulgated. As the Western notions of knowledge and development dissipated, their determination to become changemakers turned heads, encouraging other like-minded countries to join the movement. Since then, various matters of global significance - right from terrorism to environmental protectionism - have been taken up by the Developing Countries and pitched in detail for the world to deliberate. The issue of Climate Change has not been left unaddressed.



Despite the backdrop of economic development and restructuring, the developing nations have diverted attention and resources towards reducing carbon emissions triumphantly. The countries realise that they will have to bear a substantial burden of climate change due to geographic and socio-economic conditions. Leaders, academicians and advocates have taken to the global platform to champion the ramifications of incautious fossil fuel consumption and deforestation - direct causes of climate change. Dispersing their ages-old know-how of forest conservation and minimal lifestyles that challenge the Western trickle-down theory of development and participation is one of the facets of the Third World's era of development.



# COP at the Covid Hour



The Climate Change Clock kept ticking amidst the world experiencing shutdown due to Covid-19 pandemic, only to be snoozed for deliberation till Nov'21 at Glasgow, UK.

Our experiences with the pandemic and climate change are similar. The underprivileged have always borne the brunt of the actions of the privileged ones. COP26 offers an opportunity to undo the wrong. Leaders, post-pandemic, have to balance both Climate change and economic recovery. COP26 is a historic moment to transition the world from 'Code Red' to 'Go Green'.

## CHALLENGES

Prioritized vaccine access to delegates as per COP26 measures raises moral implications on grounds of discriminatory practice towards the frontline workers and suffering population in the respective countries, also called queue-jumping. Conversely, the technological divide (a high bandwidth internet connection, audio, and video-conferencing infrastructure, and multiple-language translators), the inability to experience verbal and non-verbal cues, distinct time zones, and remote distractions disincentivize the idea of e-deliberations.

Geopolitical tensions among major GHG emitters namely China and the US over climate change cooperation, the Sino-India military standoff, and the Afghan crisis will test the determination of nations to come to terms with a collective sustainable goal.

## REGULATIONS AT COP26

In line with the pandemic situation, the following measures have been devised for the COP26 attendees:

1. The UK Presidency offered vaccination via online registration on UNFCCC's portal, encouraging fully vaccinated delegates by October-end.
2. Unvaccinated and vaccinated delegates from red-list countries (high COVID risk countries, to be traveled only in most extreme circumstances) will be required to quarantine

for 10 and 15 days respectively (accommodation costs to be borne by the UK presidency).

3. Green-list and amber-list nations are exempted from self-isolation.
4. Negative pre-arrival covid report is a prerequisite for everyone attending the Convention.
5. Regular and regressive covid-testing of the attendees will be practiced.

## STAKEHOLDERS ATTENDING THE COP

The success of any action lies in the diverse voices that helped shape it. Here is a list of voices at COP this year:

- **Civil Society and Climate Activists:** 2,500 NGOs including Greenpeace and Climate Action Network.
- **Students:** Groups like Votes for School will advocate for climate education.
- **Women:** Global Women's Assembly for Climate Justice for inclusion of women in climate policies.
- **Indigenous Tribes:** *Mapuche* people will represent displaced tribes of the Amazon.
- **Farmers:** Kerala startup *Equator Geo* among many to represent small farmers. Its model 'Net Sink Credit For Climate Equity', has been invited.
- **Investors and Managers:** Lucas Joppa, Microsoft CEO will attend Climate Action100 to mobilize investment.
- **Rest of the World:** Live on Facebook, Twitter, Instagram, YouTube.

It is crucial that the UN climate discussions acknowledge inherent power imbalances, and work towards inclusivity among all member nations. If Climate change is a clock moving to Earth's doom, COVID is an alarm.

# OVER PROMISE, under PLAY



*"Despite many pledges and efforts by governments to tackle the causes of global warming, CO2 emissions from energy and industry have increased by 60% since the United Nations Framework Convention on Climate Change was signed in 1992."*

## -Report by the International Energy Agency

Over 130 countries and more have come forward to consider reducing their carbon emissions to net zero by 2050, as an act to strengthen their commitment, the foundations of which were set in the 2015 Paris Agreement. However, the gap between these ambitious commitments and on ground climate action is notably falling short of what is needed to limit the rise of global temperatures to 1.5°C.

Ever since the Paris Agreement in 2015, many countries have pledged to contribute towards net zero but the definition of 'net zero' differs for each country. For instance, the EU considers acting towards lessening all the GHGs (greenhouse gases), while China considers only Carbon Dioxide as its net zero. The fact remains that there is no legally binding agreement to ensure that the countries adhere to their commitments and not manipulate as per their convenience.

While every country must plan its own strategy to transition to a clean energy economy accounting to their varying economic development stages, it is also to be considered foremost that these transitions are for the betterment of the people, to provide them with better jobs and to build a world that not only boosts economic growth but is also inclusive.

The world's top three emitters - China, the United States of America and India are responsible for 41.5% of total global emissions. India too is among the top 10 emitters. On the brighter side, countries have slowed down their emissions since 2013, India and Indonesia for instance, have also decreased their emissions per capita. Nonetheless, collective action by the top 10 emitters is vital to fight climate change consequences.

## COP26 AND INDIA

### "No one said no, but no one said yes"

*In a recent interaction between the U.S. Special envoy for Climate Change: John Kerry and Minister of Environment and Climate Change: Bhupender Yadav, Mr. Kerry urged the government to strengthen their commitments to ensure global warming levels are held at 1.5°C. To his pitch, he received no firm commitments from India w.r.t carbon neutrality or net zero by 2050. While the U.S. stepped up to help India financially to achieve the target of 450 gigawatts of renewable energy capacity by 2030, the efforts in this direction would be in vain if we do not make the most of this decade starting now.*

*To address the climate disasters (cyclones Amphan, Tauktae, Yaas, monsoon flooding, etc.) and the internal displacement of populations arising due to these damaging events, India has begun to participate in the global alliances. Despite these leading policies and coalitions, the concern arises if India has over promised some aspects making it practically difficult to implement in this decade?*

*India adhered to its Nationally Determined Contributions (NDCs) of reducing emissions by 33-35% and increasing non-fossil-based resources to 40% by 2030. But as of now, the pathway is out of sight as the country has not achieved half of the promised goal. India needs to produce a carbon sink (forest cover) of 25-30 million hectares by 2030. With active participation of stakeholders- governments, businesses, investors, and citizens, it is possible to achieve this challenging goal. A legally binding agreement plays a vital role as it ensures the target stands as a priority for the top 10 emitters.*

*India holds an opportunity to lead the change in terms of fulfilling climate goals and magnifying sustainable consumption patterns as it is predicted to become the most populated country by 2027.*



# YOUTH & COY16

The Global Climate Risk Index puts India in 7th Position in terms of vulnerability to extreme weather events. By 2022, the median age of India is 28 years and more than half of the Indian Population is under the age of 25. While many consider it a boon for the growth of the Indian Economy, it also means that Indian youth forms that segment of the society who are highly vulnerable to climate change not just in India, but the entire world.

"We are clearly the last generation that can change the course of climate change, but we are also the first generation with its consequences," said Kristalina Georgieva, the CEO of the World Bank. It simply cannot happen in the absence of youth involvement.

## YOUTH RAISING THEIR STAKES WITH COY

YOUNGO, which was formally registered in 2009, represents young people from all across the world in UN climate negotiations under the UNFCCC. Since its inception, YOUNGO has organised and sponsored a COY each year, directly preceding the UNFCCC's annual Conference of Parties (COP). This gathering provides an important opportunity for youth to network, receive topical training, and prepare to participate actively in the COP and other UN processes related to climate change, environmental protection, and sustainable development.

Its goal is to bring together global youth in order to combine national and regional inputs into global youth positions that will be fed into climate negotiations.

COY continues to bring together children and teenagers from all walks of life and from all corners of the globe, with the number of participants constantly increasing over time. It is organised by young people for young people. Furthermore, in 2015, the concept of COY began to gain traction around the world. COYs were recognised as valuable by young people, who were motivated to organise Local COYs (LCOYs). To empower, educate and engage with youth and ensure that all the decision making processes are accessible and inclusive, we understand the importance of timely response.

**Hence, the students at TERI School of Advanced Studies drafted a youth statement, which will be fed into the national youth statement.**

## YOUTH INVOLVEMENT IN DECISION MAKING PROCESS

Active and engaged young people can be a source of government innovation and improved service. By encouraging youth to participate in open government initiatives, governments can create positive impact on a personal level and with regard to the overall development of societies and economies. For instance, governments can encourage the development of new, innovative industries and initiatives whilst young people can provide governments with fresh ideas and approaches and ensure that policy outcomes are responsive to the concerns of the people.

Engaging young people in open government initiatives can result in an increasing understanding and interest among young people in civic and political affairs and foster active citizenship. This can contribute to social wellbeing at an individual level, by building self-esteem and a sense of empowerment, and bring about important benefits for societies such as an increased awareness of common challenges and a joint commitment to identify solutions that work in the long run. Ultimately, it also benefits society as a whole by reinforcing positive civic behaviour: enhanced participation in civil society and politics, staying informed on politics, and voting or encouraging young people to run for official positions in elections. Engaging people at a young age builds strong citizens and builds trust and transparency between generations and between citizens and their government.

While young people are willing and able to act and in many cases, believe they have the skills to do so – there is still a need for relevant education, training, public awareness and access to information, as these are all critical for building the skills for effective climate action. They not only lack avenues for active participation, but also the climate literacy, language and leadership skills to initiate climate action amongst their peers and within their communities.

Principle 21 of the Rio Declaration emphasizes utilizing the creativity of youth in global partnerships. Article 6.a.iii on UNFCCC public participation highlights the importance of youth and Paragraph 50 of the recent Rio+20 outcome document 'The Future We Want' declares that "the contribution of children and youth is vital to the achievement of sustainable development". Furthermore, youth involvement in decision-making processes is crucial in operationalizing the principle of Intergenerational Equity.

Source: [https://bit.ly/youthstatement\\_TERISAS](https://bit.ly/youthstatement_TERISAS)

# KNOWLEDGE UPGRADE

## POSSIBILITY OF GREEN GRID ANNOUNCEMENT AT COP26

India and the UK are likely to announce a joint declaration on "one sun, one world, one grid" – or OSOWOG, a concept New Delhi has been pushing through its International Solar Alliance at the upcoming COP26. The declaration will be made by India and the UK but other ASEAN countries will also participate. The climate secretariat will put a road map in place at COP26, on how to achieve this vision. The concept pitches the idea of a transnational solar grid, from which different countries can draw power.

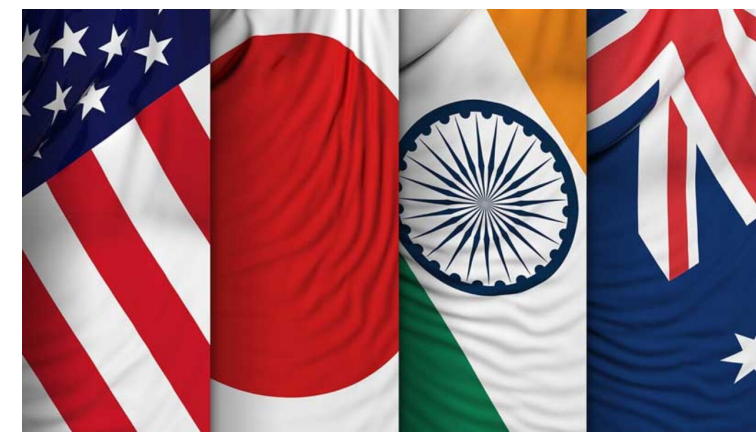
The aim by 2050 is to create a single power grid of renewable energy accessible across continents – with production in one continent and distribution of power in another."

## AHEAD OF COP 26, THE WORLD'S LARGEST CARBON-CAPTURING PLANT OPENED IN ICELAND

World's largest carbon-capturing plant started operating in Iceland on 8th September 2021. This facility caught the attention of the entire world as it operates entirely on renewable energy, obtained from a geothermal power plant that is located nearby. The plant has been named Orca and it is capable of capturing around 4000 tonnes of carbon dioxide each year. The plant is a significant milestone towards the global net-zero emission target.

## QUAD COUNTRIES CONTEMPLATE UPDATING THE NDCs BEFORE COP 26

A joint statement was issued by the Quad countries (Japan, Australia, India and the United States) which stated that the Quad countries intend to update their NDCs (Nationally Determined Contributions) ahead of COP 26. As a member of the Quad, India too intends to update its NDCs (under the Paris agreement). The Quad nations have pledged that they will contribute towards the global goal of net-zero emissions by 2050.



## INDIA RATED 'HIGHLY INSUFFICIENT' BY CLIMATE ACTION TRACKER (CAT)

A new rating system towards COP 26 analyzed India's nationally determined contributions and rated India's actions and policies 'highly insufficient' towards tackling climate change. This new system of rating tracks the actions of the governments and compares them to the goals of the Paris agreement. According to this new rating system that was announced on September 15, 2021, only Gambia (a country in West Africa) was rated sufficient, while countries like UK, Ethiopia and Nepal were rated 'almost sufficient'.





# MESSAGES FROM FACULTY



**Dr. Eklabya Sharma**  
Vice Chancellor, TERI SAS

This issue of VASUNDHARA magazine - an initiative by the students of Eco Club, TERI School of Advanced Studies, focuses on (United Nations Framework Convention on Climate Change) UNFCCC's Conference of Parties (COP) 26 at Glasgow and Convention on Biological Diversity COP 15 in Kunming, China.

Both conferences are of great global significance for deliberations on actions for climate change and biological diversity, more so since they slowed down during the past two years due to the challenges from COVID-19. The South Asia region has even more relevance for these conferences because a part of the region (the Hindu Kush Himalaya) is witnessing a rise in temperature much faster than the rest of the world and its biodiversity loss is alarming.

The Paris conference, 2015 culminated with a global agreement of keeping the global temperature rise below 2 °C by 2100. But the recent IPCC report says that in these six years, the results are far below the expectations. The message for the world from the report is 'we must act now'.

Hopefully, during COP 26, a stringent action monitoring mechanism will be developed, agreed upon and then implemented in coming years.

South Asia is at the forefront of climate change aggravated by COVID-19. Some climate actions for resilience building that need immediate attention are: scaling up the climate smart social protection system; promoting nature-based solutions; developing an inclusive and climate-responsible financial landscape; developing a resilient entrepreneurial ecosystem; promoting resilient infrastructure development; and developing sustainable and inclusive labor markets. India's efforts in implementing programmes on clean and renewable energy is noteworthy, however, climate resilience in natural resources and agriculture sectors should also receive greater attention. Regional cooperation in South Asia for climate action, especially for natural resources would help resilience building. Least Developed Countries and Developing Countries can access the global 'Green Climate Fund' and 'Adaptation Fund'.

Climate change and biodiversity conservation relates to creating a better world in the future, hence students and youth become critical mass to be involved in education and awareness programmes for intergenerational continuity. VASUNDHARA, through this issue shall certainly bring awareness amongst students, teachers and communities at large. I am sure this issue will benefit a large section of our society, particularly the youth.



**Prof. Manipadma Dutta**  
HOD, Business and Sustainability, TERI SAS

COP26 countdown has started. Saving the Earth is the mission. Net Zero is the goal. We all are eagerly looking at the success of the Conference! Mid-century 1.50 C is the target! We must achieve it! Little choice is left! We should be desperate. The world is indeed! USD 100 billion needs to be mobilized to protect the affected habitats and communities. Paris Rule Book must be finalized! Huge tasks! Immense responsibilities! Gradually we came to understand the real meaning of 'Vasudhaiva Kutumbakam'.

Vasundhara, our Eco Club organ, cannot afford to remain silent spectators! Vasundhara continues to reiterate its commitment by bringing out a special issue dedicated to COP26! TERI SAS fraternity, in its ever-expanding mission to fight the cause of sustainability, shoulders the responsibility of spreading and sharing knowledge which remain the essential prerequisite for achieving goals unitedly!

I feel proud to be part of the journey!  
Long Live: MISSION; CONVICTION; COMPASSION!



**Dr. Fawzia Tarannum**  
Assistant Professor, TERI SAS

Not everybody is in the same boat and neither the storm is treating everyone alike. Climate change is having a differential impact on different people based on gender, caste, class, color, ethnicity, among others. How climate justice is reflected in the Paris Agreement and the Nationally Determined Contributions (NDCs) by countries shall determine the equitability and inclusiveness of the anticipated response. It is equally essential that the transitions that are proposed are just. Disruptive transformations leave people at the bottom of the pyramid at the receiving end and often trap them in a downward spiral. What our leaders are thinking for the disadvantaged communities, and how their well-being features in the larger arena of climate change adaptation and mitigation policy and praxis shall be crucial in deciding the fate of the person at the last mile.

# MESSAGES FROM FACULTY



**Dr. Manish Kumar Shrivastava**  
Assistant Professor, TERI SAS

The COP26 is perhaps the last chance for the global community to take hard, substantive steps towards averting the climate crisis looming large on the horizon. The COP presidency, the government of UK has been putting its diplomatic capital over last year in convincing countries to commit to a net-zero emission target, and it has been demonstrably successful in doing so. While such long-term targets give a strong political signal to the market, they are also extremely susceptible to complacency and delays in action, something the world cannot afford. We have seen this in the past. Softer goals of the UNFCCC were shifted to quantified goals to be achieved by a decade later as part of the Kyoto Protocol. Then, the USD 100 bn per year Cancun commitment of support to developing countries by 2020 was shifted to the year 2025, and the emission reduction goals for 2020 were marginalized in favor of NDCs, most of them have 2030 as target year. The long-term net zero emission targets run the risk of further weakening and postponing the 5 year cycle of NDCs. The only way, this can be avoided is by making even stronger and immediate commitment and compliance on financial and technological support, perhaps much bigger than USD 100 bn per year. Otherwise, COP 26 is likely to be the biggest failure and sham of multilateral cooperation.



**Dr. Kamna Sachdeva**  
HOD and Associate Professor, Department of Energy and Environment, TERI SAS

Awareness and education are pivotal for climate action, and effective communication of the consequences and available response measure is indispensable for achieving results. Now it's clear that impacts of Climate change are inevitable and providing integrated knowledge with technology and innovative measures about the responses is essential. Coping with change is not easy but veracious efforts by the youth of the country with appropriate knowledge can make a difference. Mainstreaming information of possible impacts, reactive adaptation, and information about mal adaptations in the existing curricula at primary, secondary and higher education can make positive and sustainable changes in the behavior and consumption pattern. It further initiates the positive loop of iteration. We can convert these positive examples into stories to give hope to the vulnerable communities and motivate them to participate in the act of climate action, this is only possible with effective climate change communication.

## MESSAGE FROM FOUNDER



**Rajesh Kumar**  
Founder, Vasundhara  
MBA BS (2019-21)

Gatherings like COP26 and other such conventions under the UN are considered "successful" when the participants ratify to a joint declaration of intent. Whether or not it constitutes "success" in terms of on-ground action and implementation is another matter altogether. Taking the historical precedent into consideration, such gatherings rarely result in major binding decisions. Any notional commitments must be ratified by the home governments of individual participants. That's usually when the wheels fall off the wagon. Without decisive action, we are gambling away our last chance to — literally — turn the tide. There is no planet B and we have loaned this planet from our future generations.



## CAUGHT IN ACTION!

Photographs by Ananya Pandey, MSc Economics



## A DISTRESS CALL

*Listen, give me an ear!  
I'm here, just for you to listen,  
Earth is yelling that she doesn't rejoice,  
in being called "hot" anymore,  
And you are here prepping to make her more!*

*Hi creature! jot down what I say,  
take it as a warning, as that way,  
Stop creating imbalances here in,  
let the life thrive in.  
Don't clear the patches anymore,  
it kills more than a crore.*

*Don't litter down the soil,  
In future, it will be a great toil,  
It's better to use those bins,  
Rather than doing all these sins!!*

*Abhor the plastics, cfcs,  
Let the ozone live without a tweeze,  
Breath in, a deep breath how do you feel,  
the dainty flowers aroma or light cool breeze, ahh  
how can you forget the smell so loving, yeah you  
got that; I'm talking about the Petrichor, no need  
to mention it's calming and addictive.*

*Do you want to lose this all?  
In just no time at all.  
For this worthless greed,  
Forgo them all.*

*I know you are desperate, so let me make you  
exhale...  
How did you feel? pretty much exhausting!!  
If you won't notch up now,  
You will choke the same way, aye  
You know how!?*

Poem by  
Isha Narayan (MSc ESRM)  
TERI SAS



## RECOMMENDATIONS

### MOVIES

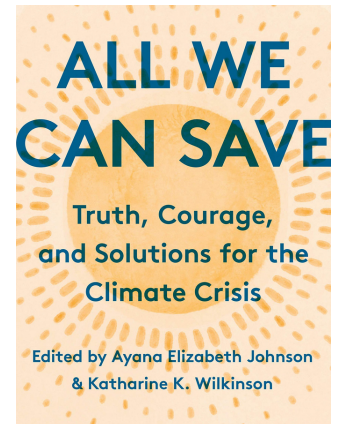


The Island President (2011)



Before the Flood (2016)

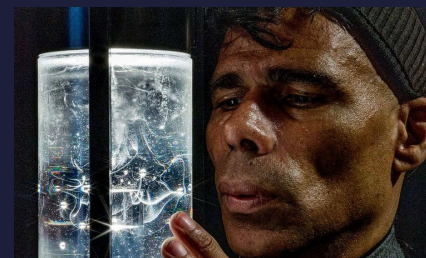
### BOOKS



All We Can Save (2020)  
Edited by Ayana Elizabeth  
Johnson and Katharine  
Wilkinson

### DID YOU KNOW?

Wayne Binitie's artwork "1765 - Antarctic Air", is created from a two-and-a-half-century-old Antarctic snowfall. Throughout the UN climate summit COP26 in Glasgow, it serves as the center piece of the Polar Zero display. Binitie says he wants his piece to serve as a visual representation of how dramatically the earth's atmosphere has changed since 1765.



### COMIC CORNER



Comic by: Ujjay Mohan



# REFERENCES

## Highlights from the UNFCCC

- Conference of the Parties (COP). (n.d.). United Nations Climate Change. <https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop>

## Milestone Check: From COP21 to COP26

- Ferrere, M. (2021, September 30). What is COP26 and why is it so important? Euronews.green.
- Grantham Research Institute on Climate Change and the Environment. (n.d.). Climate Change Laws of the World. The London School of Economics and Political Science. <https://climate-laws.org/>
- Greenhalgh, E. (2016, August 2). 2015 State of the Climate: Global Temperature. Climate.gov.
- Hales, J.H. (2021, August 16). What Is COP26 — and Why Is the Summit a Critical Moment for Leadership on the Climate Crisis? Global Citizen.
- International Energy Agency. (2021). Global Energy Review 2021, IEA, Paris. <https://www.iea.org/reports/global-energy-review-2021>.
- Lindsey R. (2021, October 7). Climate Change: Atmospheric Carbon Dioxide. Climate.gov.
- Koons, E. (2021, June 17). COP26 – Is This Make or Break for The Paris Agreement? Energy Tracker Asia. <https://energytracker.asia/cop26-is-this-make-or-break-for-the-paris-agreement/>
- Oxfam International. (n.d.). 5 natural disasters that beg for climate action.
- Redmind-King, G. (n.d.). UK to host 2021 UN climate summit, COP26. Energy and Climate Intelligence Unit.

## The Age of the Anthropocene

- CO2nsensus LTD. (2021, June 29). Top 5 Sectors Contributing to Global Warming. <https://www.co2nsensus.com/blog/sectors-contributing-to-global-warming>
- European Environment Agency. (2021, May 11). Agriculture and climate change.
- Industrial impacts. (n.d.). Air Pollution.
- Hubbe, A. & Hubbe, M. (2019). Current Climate Change and the Future of Life on the Planet. Front. Young Minds. 7:37. doi: 10.3389/frym.2019.00037
- Soni, P. (2019, December 9). Climate change cost India over 2000 lives and \$37 billion in just a year. Business Insider India.
- Watts, J. (2020, May 27). 'The human fingerprint is everywhere': Met Office's alarming warning on climate. The Guardian.

## Islands of Uncertainty: The Disproportionate Impact of Climate Change

- Diringer, V. (2021, June 28). Small Island Developing States & COP26: An Interview with James Ellsmoor. Climatalk Team.
- Ghosh, T., Hajra, R., & Mukhopadhyay, A. (2014). Island Erosion and Afflicted Population: Crisis and Policies to Handle Climate Change. Doi: 10.1007/978-3-319-04489-7\_15.
- Kapoor, A. (2018, May). Inching Closer: Life on the Sinking Island of Ghoramara. The City University of New York.
- Mead, L. (2021, March 29). Small Islands, Large Oceans: Voices on the Frontlines of Climate Change. International Institute for Sustainable Development.
- Muller, N. (2020, May 01). In the Indian Sundarbans, the Sea Is Coming. The Diplomat.
- Singh, S.S. (2019, November 23). Hungry tides of the Sundarbans: How the rising seas create environmental migrants. The Hindu.

## Species at the Frontline

- Bird Life International. (n.d.) <https://www.birdlife.org/>
- Carr, G. (2021, July 26). The restoration of Gorongosa National Park. Africa Geographic. Global Climate Change. (2021). NASA. <https://climate.nasa.gov/>
- Leclerc D, Obersteiner M, Barrett M, Butchart SHM, Chaudhary A, De Palma A, DeClerck FAJ, Di Marco M, et al. (2020). Bending the curve of terrestrial biodiversity needs an integrated strategy. Nature, DOI: 10.1038/s41586-020-2705
- Nagendra, H. (2015, October 3). A Tale of Two Lakes: Collective Action in Cities. The Nature of Cities. Retrieved October 9, 2021, from
- 'Tree platforms to ponds, urban nature is a panacea and a bulwark against climate change'. (2021, July 3). The Times of India.

## The South Scenario

- Panigrahi, S. K. (n.d.). Climate Change and Development in Indian Context. UNFCC. <https://unfccc.int/cop8/se/kiosk/cd4.pdf>
- United Nations. (n.d.). Conference on the Human Environment, Stockholm 1972. Retrieved October 9, 2021, from
- Goswami, A. (2021, September 16). India's climate action 'highly insufficient': New rating system. Down to Earth.

## India's Breakthrough towards Fighting Climate Change

- Pandey, H. T. (2009, April). NCBI. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2822162/>
- Sharan, S. (2019, June 08). Ministry of External Affairs.

## India and UNFCCC: Past Achievements and Future Goal

- Climate Action Tracker. (n.d.). Policies & action. Retrieved October 8, 2021, from <https://climateactiontracker.org/countries/india/policies-action/>
- Ministry of Environment, Forest and Climate Change & National Biodiversity Authority. (2019). Implementation of India's National Biodiversity Action Plan: An Overview 2019.
- Mohnish, M. (2016, June 27). Outcome and Indian stance in COPs 1 - 21 - Indian Council of World Affairs (Government of India). Indian Council of World Affairs.

- NRDC, ASCI, CEEW, TERI, IIPH, & SEWA. (2020, September). THE ROAD FROM PARIS: INDIA'S PROGRESS TOWARDS ITS CLIMATE PLEDGE. National Research Development Corporation
- One World One Sun One Grid, India's Message at COP 24. (2018, December 9). Delhi Greens Blog.

## Climate-resilient villages

- Dhruval, D. (2019, March 14). M.C. Mehta v. Union of India – Ganga Pollution Case – Case Summary. Law Times Journal.

## Vocal for Local

- Abhinav NGO. (2021). Linkedin. <https://www.linkedin.com/in/abhinavindiango/?originalSubdomain=in>
- About Us. (n.d.). Haritika. <http://haritika.in/about>
- ASSIST | Building Ideal Communities. (2020, May 30). ASSIST. <https://www.assist-india.org/>
- Balajee Sewa Sansthan - Conflict of Interest Declaration. (n.d.). Balaji Sewa Sansthan. <http://bssindia.net/conflict-of-interest.php>
- Bhalla, T. (2019, September 24). [Funding alert] EV mobility startup Blu Smart raises \$3M in funding from Deepika Padukone's investment office. YourStory.Com.
- Das, P. (2020, November 16). How Pamban's Kadal Osai is helping the fisherfolk listen to the true sound of the ocean and save the environment. Edex Live.
- Hussain, F. (2020, March 23). Green footprint: 'Wormrani' champions zero-waste living. The Times of India. Indian Youth Climate Network. (n.d.). <https://iycn.in/index.html>
- Thakur, S. (2019, June 5). 2019 Ford EcoSport prices now start at Rs 7.69 lakh. Autocar India.
- Vani Murthy – SWMRT. (n.d.). The Solid Waste Management Round Table.
- Vasudha Foundation – Green ways for a good earth! (n.d.). Vasudha Foundation. <https://www.vasudha-foundation.org/>
- What We Do – Farm2Food Foundation. (n.d.). Farm2Food Foundation. Retrieved October 9, 2021, from <https://farm2food.org/what-we-do/>

## COP at the Covid Hour

- Al Jazeera. (2021, September 16). Climate change not slowed by the COVID pandemic, UN warns. Climate Change News | Al Jazeera.
- Cabinet Office. (2021, September 7). COP26 President statement on COVID measures for delegates coming to Glasgow. GOV.UK.
- COVID-19 and COP26: impact, timing and what does it mean for Climate Justice? - COP26 Coalition. (2021, April 22). COP26 Coalition - UK-Wide Coalition Organising Ahead of the 2020 UN Climate Negotiations in Glasgow.
- Davies, L. (2021, September 7). Cop26 will be 'rich nations stitch-up' if poorer countries kept away by Covid. The Guardian.
- Eva, M. (2021, September 10). Climate Action Network calls for postponement of formal COP26 negotiations due to lack of plans to ensure safe and inclusive participation. Climate Action Network International.
- Hampton, K. (2021b, April 16). The flight to Glasgow: What must we agree to at COP26? ORF.
- Hua, S. (2021, September 2). John Kerry Seeks China's Climate Cooperation, Gets an Earful on Fraying Ties. The Wall Street Journal.
- Lih Yi, B. (2021, September 7). Climate groups call for COP26 summit delay over vaccines, costs. Reuters.
- Thackray, L. (2021, October 11). Which countries are on the UK's red list? The Independent.
- UNEP. (2020, September 9). United in Science report: Climate change has not stopped for COVID19 [Press release].
- United Nations. (n.d.-b). What Combating COVID-19 Can Teach Us About Tackling the Climate Crisis.

## Shift in the Era of Development

- C2ES. (2020, February 4). Climate Change Mitigation in Developing Countries: Brazil, China, India, Mexico, South Africa, and Turkey. Center for Climate and Energy Solutions.

## Green Financing @ cop26

- Carbon Trust. (2021, August 4). The finance sector, COP26 and building a connected global green economy. Climate Action.
- Center for Climate and Energy Solutions. (2021, June). Climate Finance: Issues for COP26.
- Sharma, A. (2021). The Golden Opportunity: A Green, Inclusive, and Resilient Recovery. International Monetary Fund.
- UNCCC UK2021. (2021, October 14). Finance. UN Climate Change Conference (COP26) at the SEC – Glasgow 2021. <https://ukcop26.org/cop26-goals/finance/>

## Drawbacks in Agenda Items and Proposed Enhancements

- Byrnes, R. & Surminski, S. (2019). Addressing the impacts of climate change through an effective Warsaw International Mechanism on Loss and Damage. The London School of Economics and Political Science.
- Calliari, E. (2018). Loss and damage: a critical discourse analysis of Parties' positions in climate change negotiations. Journal of Risk Research. 21(6), 725-747, DOI: 10.1080/13669877.2016.1240706
- Nandi, J. (21 September 2021) Explainer: Why COP 26 risks failure? Hindustan Times.
- Presidency Programme COP26. (2021). UN Climate Change Conference UK 2021. <https://ukcop26.org/the-conference/presidency-programme/>

## Over Promise, Under Play

- Friedrich, J. (2020, December 10). This Interactive Chart Shows Changes in the World's Top 10 Emitters. World Resources Institute.
- Haidar, S. (2021, September 15). No firm commitment from India on net zero, says John Kerry. The Hindu.
- India | Nationally Determined Contribution (NDC). (n.d.). Climate Watch.
- International Energy Agency. (2021, May). Net Zero by 2050: A Roadmap for the Global Energy Sector. <https://www.iea.org/reports/net-zero-by-2050>
- Khasru, S. M. (2021, September 24). A climate change narrative that India can steer. The Hindu.
- Lakshman, S. (2021, September 18). U.S. President Joe Biden unveils plan to cut methane emissions. The Hindu.
- Sarma, N. (2021, July 2). Climate pledges: Where they stand and what they mean. ORF.
- 76% decline in coal power projects since Paris pact to tackle climate. (2021, September 15). The Pioneer.
- United Nations. (n.d.). Net Zero Coalition. <https://www.un.org/en/climatechange/net-zero-coalition>



IF NOT US

WHO

IF NOT NOW

WHEN

---

An Eco Club Initiative @ TERI SAS

