

**TIMES
EVOKE**

LET'S TALK ABOUT THE WEATHER

A degree is a small quantity — with the power to transform lives. This week, the United Nations stated the world will most likely miss its target of a 1.5°C rise in global temperature. Finding carbon reduction plans 'woefully inadequate', the UN surmised Earth could warm by 2.8°C this century. Termed 'climate change', this phenomenon can be hard to fathom, for its impacts are hydro-headed, stretching from the planet to localities and across time.

Globally, the number of extremely hot days each year — when the temperature hits 50°C — has doubled since the 1980s, the BBC finds. The summer of 2022 saw record-breaking temperatures in Europe and North America, causing forests to burst into flames and rivers to shrivel to dust. Asia-Pacific is severely affected — the Lancet finds India suffered a 55% rise in the loss of lives due to extreme heat between 2017-21. Such heatwaves — and their impacts on water, food and work — will intensify, climate change making these 100 times more likely to occur. As Earth warms, Arctic ice, glaciers and oceans are melting, acidifying and releasing even more dangerous gases. Meanwhile, fossil fuels keep insidiously entering the human body — the Lancet estimates 3,30,000 losses of lives in India from exposure to particulate matter in 2021.

Its multifarious nature makes it vital we talk about climate change. Human progress has been founded on discussing complex problems and creating revolutionary breakthroughs. Adaptation to global warming requires understanding it and here, as Times Evoke's global experts emphasise, media and multiple ways of public outreach are key. The IPCC finds the coverage of climate change — the 'greatest story on Earth', as Times Evoke's volume 'To Nature, With Love' emphasises — has grown. Across 59 countries, climate reports increased from 47,000 in 2016 to 87,000 in 2021. Each chronicle empowers us to understand this phenomenon more — and make a new discovery alongside. As we talk about these climates, we start to notice a magical world that lives alongside our everyday lives. This world of iridescent birds, heavenly rivers, regal trees and starry galaxies makes you realise you are part of a planet blessed with unique and precious life. Join Times Evoke in talking about this. It truly is breaking news.

'Climate change is more than a science problem — it reflects our true values'

Anthony Leiserowitz is Senior Research Scientist at Yale University's School of the Environment. Speaking to **Srijana Mitra Das** at Times Evoke, he discusses the needs — and challenges — around climate communication:

What is the core of your research?

I direct the Yale Program on Climate Change Communication. We study how publics around the world respond to climate change, understand its causes, consequences and solutions, perceive its risks and support behaviours around solutions. These include backing government policies, consumer behaviour, social norms and political actions.



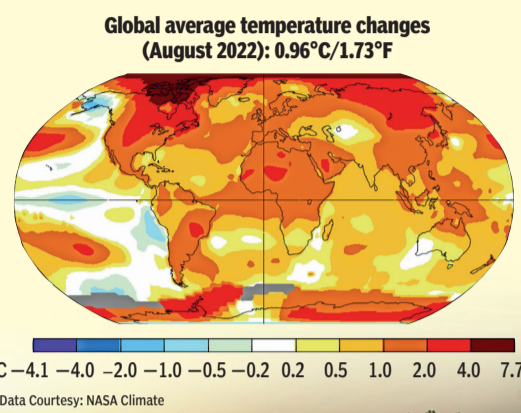
Why is climate communication so important?

Climate change is impacting all of us today. From the US to India and Vanuatu, we are all suffering these changes. We must know why rainfall, temperatures, etc., are altering. These dynamics inform all our decisions, from a farmer deciding what crops to plant to planners building new schools, roads and bridges. Making those decisions without being informed of climate science is unwise.

Humans tend to assume the climate of the future will resemble the past — science emphasises this won't be so. We're already experiencing record heatwaves, droughts

WITHIN A DEGREE

Global warming is more than a distant scientific phenomenon. Alongside the stability of our cities and our physical well-being, it impacts us at multiple levels, shaping the crops we can grow to food prices in markets, inflation, monetary and fiscal policy and economic progress



and storms. These will only get worse. We must understand this truth properly.

found 'six different Americas' or distinct audiences around climate attitudes in the US. These ranged from a group we called 'the alarmed' to 'the concerned', 'the cautious', 'the disengaged', 'the doubtful' and 'the dismissive' who were convinced climate change wasn't real. They were 9% of the country but very loud and tended to dominate our politics. Today, the alarmed have tripled in size — they are 33% of the US now. This indicates a fundamental shift in the social, cultural and political climate around global warming.

It also explains how President Biden could pass the largest climate legislation in American history — US politics has shifted enough to support positive environmental measures.

Why are people often unable to link local fossil fuel-pollution and the loss of life itself?

The main cause of such pollution, CO₂, is invisible — as humans, we don't do very well with things we can't see. We can't instinctively understand how these affect our environment. There is also the

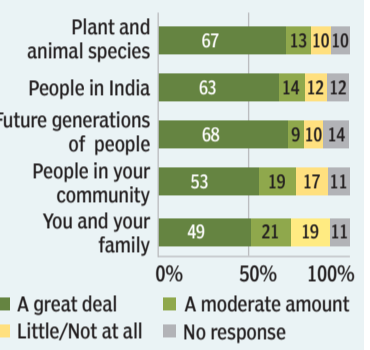
added complexity of thinking at a global level here — when CO₂, from, say, a car, goes into the air, it doesn't just stay local. It mixes with the entire atmosphere, warming the planet. This is not something we humans, whose lived reality is mostly what we can see, taste and touch around us, can grapple with. That's why the media plays a critical role in being the medium that can help people learn the science. Unless the media features it, climate change stays out of sight — till it is inescapable.

Why do you emphasise environmental understandings are also shaped by values?

Our true values guide us to what is important. This ranges from universal values, like loving your kids and grandchildren and wanting them to live in a stable world, to culturally specific ones. Climate change raises the most fundamental questions about humanity — it forces us to think about who we are. Where did we come from? What is our proper relationship to one another, to future generations and to the more than human world? The way we treat each other and the planet will have enormous consequences for all. This is why climate change is so much more than just a science problem.

THINKING BEYOND ONE

As a Yale survey in 2022 has found, a large number of Indians are most concerned about the impacts of climate change on future generations as well as plant and animal species



What are the most important findings in your 2022 report on climate change and India?

First, 54% Indians surveyed said they knew only a little about global warming — just 9% said they knew a lot. This indicates a huge need for more climate communication across India, a country significantly impacted by global warming. Alongside, when provided a single-sentence description of climate change and how it affects local weather patterns, 84% Indians said, 'Yes, that is happening'. Many people in India are very keenly aware of differences in their own local climate — they know that temperatures, precipitation and biodiversity around them are changing. But they don't have access yet to the larger concept of why this is happening.

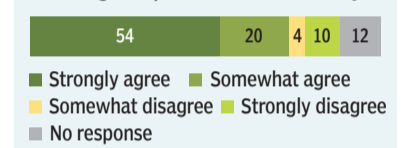
Have climate attitudes in the US changed?

Yes and quite a bit over the last six years. About 15 years ago, an analysis we did

ALL AROUND US

A NEW DELUGE

Many parts of urban India have seen record flooding through the year. Such events caused Indian respondents to state climate change impacted them directly



THEIR TIMES ARE A-CHANGIN'

The animal world is trying hard to adapt to global warming. The hamster-like American pika lives in the cool, moist Sierra Nevada and Western Rocky peaks — as these habitats grow hotter and drier with less snowfall, pikas have learnt to migrate to higher altitudes. However, as warming encompasses even glacial peaks, the pikas' future destination is unknown



Some animals are evolving to cope with climate change — the European larger banded snail is now far more often spotted sporting an elegant pale-coloured shell rather than a dramatic dark one. Light-coloured shells are known to have a lower body temperature and can help these small beings conserve energy in warming habitats

Scientists have found over time, the North American dark-eyed junco songbird and several species of vibrant Australian parrots have developed larger bill sizes — these help them dissipate body heat and lower their temperature. These changes are critical in habitats experiencing heatwaves and wildfires something these avian beings understand



'Climate literature takes us beyond science to feelings'

Sarah Dimick teaches English at Harvard University. She tells Times Evoke about climate writing taking us to the heart of global warming:

As we think about anthropogenic climate change and the future, we often ask questions of scientists. My research explores what writing, literature and art offer us in a world so altered. There are questions about climate change outside the bounds of science. This phenomenon is about a change in the composition of our atmosphere — but it is also about shifts in how we live our lives, relate to others, build our hopes, fears and understandings. These are profound transitions which can be accessed through literature.



SUMMER'S TASTE FOREGONE: Climate change impacted mango productivity in 2022, reducing yields of the loved summer fruit

Climate literature encompasses fiction, poetry, essays, drama, etc. It took off around the turn of the 20th century and engages with multiple themes. We are seeing it deal now with a strong sense of displacement — there is tremendous human, animal and plant movement in the Anthropocene. Stories are growing around climate migration, having to leave home or seeing new entrants arrive. This is literature thinking through what our ties are to each other in an uprooted world.

Another major theme is understanding climate change as emerging from histories of colonial resource exploitation and racial capitalism. Often, in news reporting, we hear of climate change being 'unprecedented' and disconnected from known history. Many writers are pushing back against this and narrating how climate change is similar to living under colonialism or oppressive systems of power, arguing that the same systems have caused this crisis.

Environmental journalism is now impacting phenological time or when flowers like dahlias, seen in winter in India, could bloom

It has a close relationship with precipitation and dryness. As climate change intensifies, many of us will be thinking about water, what life with and without it is like. Many stories will emerge around floods and drought and people coming together or confronting social divides. Indian writing will be an amazing reservoir.

I am currently working on a book called 'Unseasonable', due out in 2024. I am writing about the intersection of contemporary literature on the global scale with 'phenology', the science of environmental time or when buds open, lakes melt and fruit blooms. Many of these times are now changing with an altering climate. I am curious about such environmental timing and how changes in it can shape our stories and feelings. As environmental rhythms, from monsoon to snowfall, become destabilised, I am exploring how writers can respond to these disruptions, how literature can help us gauge these shifts and possibly navigate for readers and writers alike what it means to live with emotions, justice and dignity within such unpredictable times.



WAITING TO BLOSSOM:

Global warming is now impacting phenological time or when flowers like dahlias, seen in winter in India, could bloom

A NEW PAGE

'Newspapers can help all, from children to MPs, develop vital climate awareness'

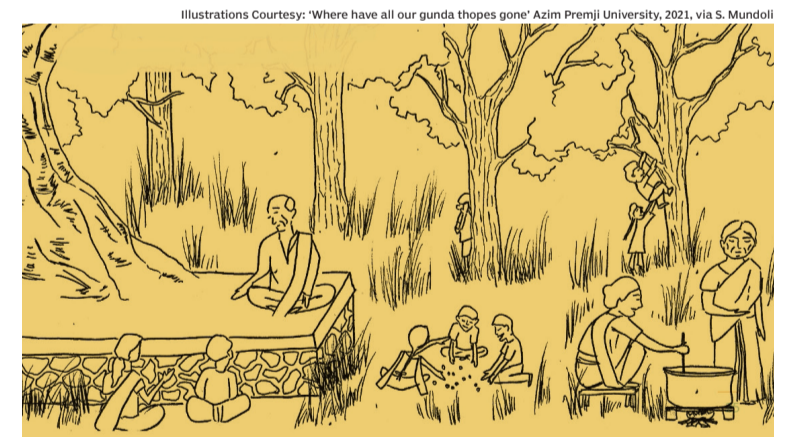
Seema Mundoli teaches at the School of Development in Azim Premji University (APU). Speaking to Times Evoke, she discusses how newspapers and other media can help people read climate science:

My research explores how we can communicate a complex idea like climate change, which is very data-heavy and can be intimidating to a layperson, to a wider audience. The acceptance of climate change is growing now but a lot of the information about it is very scientific, involving modelling, etc. I am interested in how we can tell a child or an adult what climate change is in simple ways.

I began my research by looking at urban commons and nature in cities. With my colleagues, I studied Bengaluru's lakes and wooded groves known as 'gunda thopes'. These have deep ecological value, compose social spaces and people form long attachments to them. But since we began our research, Bengaluru experienced many environmental changes, with disruptive floods, heatwaves, etc. We found a fair amount of discussion



A FAMILIAR TREE: Bengaluru is known for its sprawling old trees which, with urbanisation, represent its ecological heritage and loss — publications about these help to raise deeper awareness



ONCE UPON A FESTIVE TIME: Open-access ecological communication by Mundoli et al showcases how 'gunda thopes' or wooded groves in Bengaluru formed the focus of community life, where festivals and special occasions were celebrated

around these events in mass media including TV — but this was rapidly forgotten after the events receded. There is some discussion of the environment in mainstream media but these reports usually treat ecology as a stationary entity, hit once in a while by extreme weather. We began to think of how we could help people see the complexities behind environmental needs.

Recently, students from a well-to-do school in Bengaluru visited a lake and a village next to it — there, they met children who wanted the same lake closed up. The reason was, the lake flooded the villagers' homes every time it rained, causing distress. So, the school kids confronted the idea of ecological justice and different needs. We teach environmental science and sustainability and emphasise that students go to such sites, see the dynamics and listen to local people to understand how ecology and climate change actually unfold in everyday life.

MEDIUM & MESSAGE

It is also important to recognise the power of vernacular communication. We then contrasted this with a clean lake, so the children could understand what had gone wrong and discuss its consequences. Such visits also help young people see the complexities behind environmental needs. Recently, students from a well-to-do school in Bengaluru visited a lake and a village next to it — there, they met children who wanted the same lake closed up. The reason was, the lake flooded the villagers' homes every time it rained, causing distress. So, the school kids confronted the idea of ecological justice and different needs. We teach environmental science and sustainability and emphasise that students go to such sites, see the dynamics and listen to local people to understand how ecology and climate change actually unfold in everyday life.

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READERS WRITE

Dear Times Evoke,
Mahesh Rangarajan (15th October) brilliantly outlined how the environment is a highly complex system and human interference, disturbing other species, could cause us irreparable imbalances.
—Dipankar Jena, Asst. Professor, F.M. University, Balasore, Odisha

about climate change. The communities facing its full impacts now know that something has changed. But while they don't know the science around it, they are adapting daily — we should learn from them as opposed to us speaking at them. From Sundarbans islanders to slum dwellers in Bengaluru, we find a host of climate adaptation methods are in place. These communities have a lot to tell us.

We are also working with journalists now to help them develop the most effective ways of writing climate stories. Readers perusing environmental reports find either very data-heavy stories or emotionally draining narratives of weather events upending people's lives. Often, neither helps develop a fuller understanding of global warming. Also, considering the kind of crisis global warming is, the fact is, there are hardly enough stories in mainstream newspapers covering it. We need more editors and publishers to grow sensitive to the fact that we are living in an enormous crisis that is just starting. Usually, politics, sports and movies get far more coverage — yet, these events will come and go but climate change will last, have a global spread and reshape millions of lives. In the interest of news, newspapers should cover this far more.

In another study, we examined 20 years of the questions asked in Parliament and researched how many were related to climate change — only 0.3% of climate-related questions were asked. An MP often asks a question based on newspaper reports and articles which they research. If the proportion of climate reporting increases, so will climate queries in the Question Hour — this can only help India prepare better in the face of this huge challenge.

My nine-year-old son and I always read TE together and we were just enchanted by the beautiful page on 'Animals in the Anthropocene'. The best part was 'A Few Wild Tales', highlighting our favourite 'The Jungle Book'. I want to thank TE for sensitising readers about cruelty to animals. We can change for sure if our mindset changes. And TE always helps us become better. Thank you, TOI!
—Pooja Sahni, Delhi

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