

**TIMES
EVOKE**

G20 EXPECTATIONS

Charles Dickens once wrote, 'It was the best of times. It was the worst of times.' Few words could better describe the state the world finds itself in today — and the relevance of the G20 Summit being held this weekend in India. Our planet has literally never faced hotter times — as the World Meteorological Organization (WMO) reports, Earth has just experienced its warmest three months ever. These soaring temperatures are caused by atmospheric carbon dioxide (CO₂), linked to emissions from fossil fuels — at 419.2 parts per million (ppm), this has exceeded a high from four million years ago when the Pliocene era was over two degrees hotter and sea levels were 33 feet higher than today.

Those seas are restive again — the EU-Copernicus Climate Service finds global sea surface temperatures at unprecedented highs, damaging vital ecosystems. Alongside, Antarctic sea ice has shrunk to a record low, reducing the albedo effect or ice's ability to reflect heat away from Earth. This is also causing a feedback loop — as ice retreats, it is replaced by a dark, heat-absorbing surface which causes more melting. Alongside, permafrost, ancient frozen terrain across the northern hemisphere which holds huge greenhouse gases, is warming — this could release twice the current carbon in Earth's atmosphere. Forests perform carbon capture but global deforestation — the UN finds the destruction of tropical forests far exceeds the rate of growth now — ensures we're losing a vital ally. Instead, forests are now releasing stored carbon with part of the Amazon rainforest emitting more than it absorbs. The entire world can feel the effects. Just this summer, the US experienced searing heatwaves and hurricanes, China suffered floods, Europe faced wildfires — one million acres were wrecked, costing four billion euros — while India saw its driest August ever.

Yet, we also live in the best of times. As the G20 reflects, humanity stands at a new stage now, where many nations have overcome the most bitter conflicts in history. From colonialism to sectarianism, slavery to nuclear warfare, the G20 suffered the worst violence but also evolved to change this through deliberation, innovation and cooperation. As Times Evoke's global experts emphasise, G20 forms the largest stakeholders in climate emissions and climate action. From clean technologies to green finance, it can create a more sustainable world. G20 citizens will look to their leaders for saving our shared home. Join Times Evoke in charting their great expectations.

'From voices of the marginal to voiceless species, G20 can help to forge environmental justice'

Mahesh Rangarajan is professor of history and environmental studies at Ashoka University. Speaking to Times Evoke, he discusses the evolution of climate justice — and the G20's potential:

The G20 Summit brings the notion of environmental justice to the fore. The environment itself came onto the international agenda formally in 1972 at the Stockholm Conference. There were agreements before, such as the Partial Nuclear Test Ban Treaty of 1963, motivated by concerns about what radioactive fallout would do to Earth. A notion of ecological safety and the future had begun.

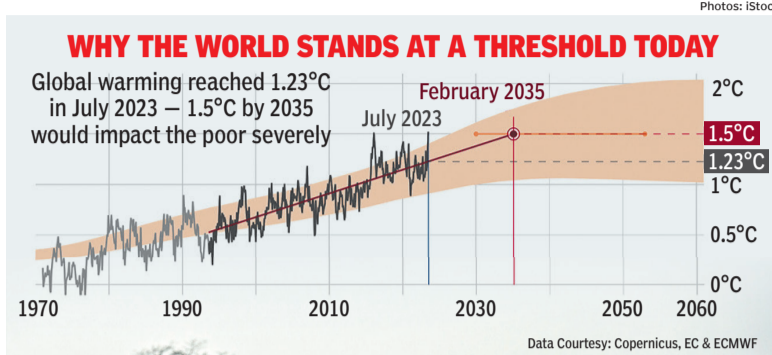


But the first global conference on the environment was in 1972. One of the strongest fissures then was between communist and capitalist countries or the Soviet and US-led blocs. The other was between the global North and South. Even though broad agreement emerged that the environment should be protected, there was disagreement on who'd pick up the bill for this. Many developed countries said ecological problems were due to population, looking askance at Asia, Africa and Latin America. Developing countries argued the historical trajectory of imperialism and industrialisation was crucial and development could not be denied to latecomers — if environmental costs were to be controlled, technology and finance would have to be shared.

In 1992, the UN Environment Conference met in Rio de Janeiro, Brazil. By then, as much scientific climate work had come into public prominence, concerns about global warming had grown more central. Yet, divisions had also become sharper. It was clear now that greenhouse gases would be global in their impacts, encompassing everything from precipitation to oceans, crops to human health. But this was a post-Cold War world where the US saw economic growth as the major driver of solutions. A strong critique of this was made in 'Global Warming in an Unequal World', authored by Anil Agarwal and Sunita Narain, who used a car park analogy where a small number of



LOOKING FOR A FAIR DEAL: Indigenous groups work mines — but rarely benefit



people had taken a great deal of space and others couldn't even park a bicycle. They questioned how the global atmosphere could be apportioned now — would it be as per histories of growth, country size or per capita?

A WALK IN THE PAST

Today, a lot has developed, including agreement on the principle of common but differentiated responsibility. The Sharm El-Sheikh COP in 2022 also saw concerns about global warming exceeding a safe margin. The issue of climate justice is now posed in a very stark form — all governments agree that something must be done. But the question remains — who will pick up the costs? One difference is that today, partly because of international cooperation stemming from globalisation, there is an idea of involving the private sector, mobilising capital and making technology accessible to more countries than possible earlier. Climate justice is now also about those who would like modern development while minimising environmental harm — this applies to both developing and industrialised economies.

The notion of climate justice is also important because different nations have different relationships to the world order which took shape after World War II. This gave great weightage to the countries which led the Allied coalition. But the world today is politically and economically different — hence, it must be environmentally different as well. The global ecological agenda needs to reflect shared concerns with different viewpoints. That includes costs, technology and choices about livelihoods and lifestyles. There is a recognition that humanity must reduce its collective environmental footprint without overburdening those who contributed the least to this.

Hence, these choices must reflect the voices of the marginalised as well — this includes indigenous people and women. The Americas were transformed after the Colombian conquest over 500 years ago, a profoundly ecological and human disruption. Many countries have started recognising the rights of people displaced by this history, who are often termed First Nations. This also means ensuring their share in the proceeds of development and accommodating their worldview and practices which are extremely important ecologically. During the Morales period, Bolivia took steps to give indigenous peoples in the Amazon a share and say in forms of extraction. But nations like Brazil, Peru or Bolivia doing this remains the exception rather than the norm.

Gender is even more complex. In much of the developing world, women don't have land rights, animal rights or tools of production like ploughs or fish-

ing boats. A dilemma arises — when you choose renewable energy solutions, like taking land to grow wood for chips to be used instead of coal, what if this happens in woodlands which women depend on? That could worsen their lot. Ensuring the marginal a voice in sustainable decision-making is critical.

There are ongoing instances of this — ecologist Madhav Gadgil's book 'A Walk Up The Hill' discusses parts of Maharashtra which have bamboo harvesting done by forest committees. These are generating revenue while renewing forest cover; water recharge, etc. The use of modern technology, like GPS, biodiversity registers, etc., show the opportunities for environmental renegotiations. Can we scale up these approaches? That is the question before us now.

Then there are species which don't even speak human languages — however, their voices are also a part of climate justice. South Asia has large areas where terrestrial and marine ecologies are shared by people and other species. Anita Mani's book 'Women in the Wild' discusses research by Dr Vidya Athreya and others on leopards whose habitat often overlaps with people, coming into conflict when leopards prey on livestock, etc. But leopards and humans coexist in living landscapes — sugarcane fields, woodlands, even the great city of Mumbai. Concerns about how to live thus have brought together different communities — rich and poor, slum dwellers, residents of smart flats, all of whom are trying to learn to exist with leopards whose presence symbolises a healthy ecosystem. Divya Karnad, the geographer and ecologist, also shows how efforts to protect marine fisheries must involve local fishers. They know multiple species but need an income from fishing — it is possible to combine their knowledge to develop markets for bycatch, for instance. These are instances of people recognising that other species have value — of being a living creature and sometimes, also offering us a livelihood. The species conundrum and



WHAT DO I CALL HOME? Animals losing habitat also need environmental justice

ANCIENT WISDOMS

Traditional knowledge can boost sustainable living. The Maori of New Zealand view all living beings as members of the same family. To survive, it is essential to respect land and sea — thus, blessings are spoken before taking a fish from water or cutting a tree. In this view, everything has a life force or 'mauri' — when natural resources are not cared for, their 'mauri' weakens which impacts human well-being

The Inuit of Northern Canada see the world as a place they inhabit with other species and an entity they can't control but must adapt to. Thus, knowledge of the landscape is carefully transmitted across generations. Scientists also now rely on Inuit climate chronicles, with the community gathering information on changing ice status — and declining caribou and narwhal

The Bishnois of India's western Thar desert place existential belief in nature — founded in 1485, the group adheres to protecting all life forms. It maintains a ban on killing animals and cutting trees. The Bishnois are termed India's first eco-warriors — in 1731, Amrita Devi Bishnoi and 363 other villagers martyred themselves to save trees, such courage inspiring the iconic 1970s Chipko movement

Research: Encyclopaedia Britannica, Smithsonian Magazine, National Geographic, Scientific American, United Nations

climate change are interrelated — keeping landscapes habitable for others is important for human well-being. The conversation on species must be informed by a knowledge of ecosystems. And there is the issue of justice. Human horizons are short — they extend to the next election cycle, a quarterly report, a five-year program. But the Atlantic bowhead whale lives 250 years. Environmental historian Batsheba Demuth shows how its life is linked to communities which hunt it on both sides of the Bering Strait. How do you create a future which includes the Atlantic bowhead whale and native peoples in Russia and the US? Other countries can play a constructive role here. Cooperative discussions like the G20 can help participants include the species we share our planet with. Their well-being is intertwined with ours — and this place we call Earth.



WHERE THERE'S A WILL...

Sea otters are a keystone species, maintaining balanced ecosystems around the North Pacific Ocean. But the otter's dense fur, essential for cold waters, saw it hunted relentlessly for hats and scarves in the 18th and 19th centuries, shrinking to just 2,000. In 1911, an international hunting ban was agreed to by the US, Russia, Japan and UK — conservation and reintroduction programs then enabled otters to occupy two-thirds of their former range

The chequered skipper butterfly was abundant across the UK's woodlands — but as these habitats were used by humans, its last flight was in 1976. In 2016, conservationists restored this delicate orange and brown creature — species in the Ardennes forests of Belgium were translocated to Northamptonshire and 2019 brought the first locally born butterflies, their restoration engaging over 4,000 people



Once, 60 million bison roamed the North American plains — by end-19th century, 600 remained. Hunted for hide, meat and conquest — settlers killed bison to weaken indigenous communities — the mighty bison faced extreme vulnerability. But herders reared and rewilded some. There are 5,000 American bison today, protected by US laws and support to national parks like Yellowstone



WWF, Natural History Museum, Smithsonian Magazine, BBC, CNN

'G20 is the biggest part of the world economy, emissions and climate finance — India's leadership of it is remarkable'

Lord Nicholas Stern is chair of the Grantham Research Institute at the London School of Economics. Speaking to Srijana Mitra Das at Times Evoke, Lord Stern outlined why the G20 is central to climate action:

How pivotal is climate finance from developed economies to developing ones today?

First, climate change is already having an enormous impact on the development possibilities of emerging markets and developing economies (EMDEs) — and indeed, on all countries. We must recognise the magnitude of the threat now. We are already past the temperatures of the comparatively quiet Holocene period which followed the last Ice Age and we're moving to global temperatures which are impacting all countries — the poorest nations are being hit hardest. There is a great injustice to that as they contributed the least to greenhouse gas concentrations. So, this issue is immensely important for the entire world and particularly the developing world.

Secondly, it is key to understand that the investments needed for sustainable new technologies and infrastructure, preserving biodiversity and making adaptations for greater resilience are actually real drivers of growth. This is because in large measure, they are lower-cost, focused on resource efficiency which adds to productivity and they will see heavily concentrated future innovation. Alongside, a bad



TO GROW RESILIENT: India is pushing for hardy millets to appear on world menus

climate will only undermine our biodiversity, growth and development prospects while its health effects are enormously detrimental — in the UK, twenty times more lives are lost to air pollution than road accidents. It is likely that millions of lives in India are lost to air pollution and many are severely

WHY IT'S NOT COOL: Around 20% of the Amazon rainforest has been cut for logging and ranching — this loss corresponds to a time of rising global temperatures



damaged by it. Raising investment for clean technologies will deepen growth and sustainability. We face great dangers from not doing so — and we can achieve a real growth story by going forward. Climate finance is thus fundamental.

The investments are big — across the world, we are looking at 2% to 3% of GDP and more in EMDEs. A great deal can be financed internally through governments' resource mobilisation, private capital markets, etc. But a lot will have to be external — those numbers are around one trillion dollars a year by 2030 into EMDEs outside China. This is covered in the Bhattacharya, Songwe and Stern Report for COP-27. The same numbers underpin the excellent work of the G20 Multilateral Development Bank (MDB) Taskforce Expert Group, which has been superbly chaired by NK Singh and Lawrence Summers.

Climate finance means making climate investments — without doing that, the world will be in deep trouble. But doing so will lead us to a much more attractive economic story.

The developing world says the developed world owes it climate finance while developed nations point to high emissions from India and China. What is your perspective on these debates?

First, there is a collective responsibility — we all cause emissions and we all need to act to get to net zero by mid-century. We have a shared responsibility

— but some countries do have bigger responsibilities than others. Rich countries have a larger responsibility owing to the history of their emissions and their wealth which appeared mostly on the back of dirty growth. The majority of emissions is now in Asia. The future of rich countries also depends on lowering these — for all these reasons, rich nations have a bigger responsibility, particularly in the area of finance. The trillion dollars a year needed in external climate finance could see about half coming from the private sector but a very large sum, upto \$500 billion, would need to come from the public sector. Within that, MDBs will play a large role — these will be a very important route for the public part of those flows while helping the private sector manage risks. The climate for private investments also must be strong — people won't invest unless they can see the revenue possibilities and cost management with confidence. That depends on the host country creating a positive environment. The private sector, MDBs,

concessional or zero-cost overseas development assistance (ODA), voluntary carbon markets, philanthropy, etc., will be key. ODAs will play a very important part as many countries will require concessional resources. These three markets will be critical to the world's future.

What are your recommendations to the G20 now to hasten agreeing on and delivering climate finance in time?

This next decade is absolutely decisive — a very large amount of the world's infrastructure will be constructed. That has got to be clean. So, there is an urgency involved. On the G20, I think India's leadership has been remarkable. I've seen many G20s and India's G20 is very purposive, well-organised and comprehensive. The leadership of External Affairs Minister S. Jaishankar, Finance Minister Nirmala Sitharaman, Amitabh Kant and the PMO has been outstanding. The G20 flows onto Brazil and South Africa now and India, the biggest democratic emerging market, has set a very good direction of travel. This has also been a difficult time — the Russia-Ukraine war has caused divisions. China and the US are having fractious relations. India can be a great convenor, getting people together, despite these fissures. I think the one area where the



BEE-ING A CLIMATE CHAMPION: Biodiversity is crucial to maintaining planetary health

READERS WRITE

Dear Times Evoke,
Thank you for the interview with Sara Lewis on fireflies (2nd August). This highlighted the many uses these little creatures have for the environment. This was also timely as the Firefly Team at EMPRI, Bengaluru has identified 13,500 ha of landscape in Charamadi Ghats, Chikmagalur as worth terming Firefly Sanctuary. Lakhs of fireflies emerge here during April-June, depending on the rains. Forests in the Western Ghats constitute a vital habitat niche for fireflies. Let us maintain these areas. Thanks, TE, for spreading awareness.
— Dr AK Chakravathy, Research Scientist, EMPRI, Bengaluru

Fireflies shall always be an enigma but TE enlightened us about how they maintain healthy ecosystems. Even in smaller places, fireflies are dwindling now but TE put forth remedial measures to support them. Hats off for a very rich read!
— Dr Yogesh Salphale, Chandrapur, Maharashtra

I wasn't aware there are over 2,200 species of fireflies! There are so many wonderful plants and insects around us which play a crucial role in the cycle of life but we usually just take them for granted. Thank you, TE, for bringing us such extraordinary nuggets of knowledge.
— Rashi Beriwal, Delhi

Since childhood, as we watched fireflies shine their magical lights in dark nights, we were fascinated by them. But these little beings slowly disappeared. TE's beautifully presented article showed how urbanisation reduced firefly numbers to such an extent, today, we only have stories left about them. We can help save them though by switching off unnecessary lights. Thank you, TE, for this eye-opening piece about these 'jewels of the night'.
— Dinesh Kumar, Patna

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Enforcement mechanisms can't come from an external police force — what should give us confidence is the backing in domestic politics for these issues and the shared recognition amongst countries that our mutual dependence on climate and biodiversity is immense. There is a shared interest as well as a massive opportunity for a new pathway of growth benefitting all nations. India is already showing how productive renewable sources of energy at low cost are. PM Modi's Lifestyle for Environment (LIFE) initiative shows how people can make changes in everyday life to prioritise both efficiency and ecosystems — we can all contribute and benefit from such steps.

Enforcement should come from a mutual recognition of responsibilities, particularly of the richer nations but also all countries. Climate action is to the benefit of all countries through generating a clean new model of growth and inclusive sustainable development.