

**TIMES  
EVOKE**

**AGREEING TO AGREE**

We live in fractious times. Open a reputed newspaper any day and you will see a deluge of discomfiting headlines, outlining discord at multiple levels, from between individuals and communities to neighbourhoods and nation states. At times, the din of disagreements can seem overwhelming. It can even, horrifyingly enough, start to appear natural, turning the violence done to living beings and nature into a cliché.

Yet, that is not the true story of humanity. Amidst the clamour of contentions, there are a million tales of true cooperation. Some of these plod their way over veritable mountains of research, analyses and negotiations. These meticulous efforts at reaching a common understanding of what ails societies — and how to fix this — are manifest in international environmental agreements. As the European Union outlines, there are over 43 major environmental pacts already shared between multiple nations. Just a few include the UN Framework Convention on Climate Change (UNFCCC) with 198 countries recognising the climate system is a shared resource which is affected by greenhouse gas emissions (GGEs), the legally binding Paris Agreement with 194 countries agreeing to limit global warming to 1.5°C and 196 nations assenting to the Convention on Biological Diversity protecting ecosystems and species. The impacts of such agreements are tangible — the UNECE Convention on Long-range Transboundary Air Pollution successfully tackled sulphur dioxide emissions causing highly damaging acid rain.

Reaching these agreements isn't easy for this process involves managing multiple contentions. Prominent among these are getting past the ghosts of colonial history which, reflected in continuing poverty, still haunt many. Alongside, there are exchanges over the historical responsibility for GGEs and concerns around current economic growth. These are not simple things to talk about, much less agree on — yet, an agreement is what these pacts embody. These shared understandings represent the best of humanity, including our ability to appreciate science, acknowledge past wrongs and bravely imagine a future with greater equity. These pacts mirror the capability of humanity to elevate itself above violence and reach for ideals. Join Times Evoke on this exciting journey in the times of our world where humanity can cooperate effectively. That story makes for truly good news.

# 'Science is the intellectual basis of climate change treaties — equity is at their heart'

**Robert Stavins** teaches energy and economic development at Harvard Kennedy School. Speaking to Srijana Mitra Das at Times Evoke, he discusses the evolution of international climate change pacts — and what unites them:

**What is the core of your research?**

My work as an environmental economist has evolved over time. Earlier, much of my work was using an economic perspective to assess alternative environmental policy instruments, particularly focusing on market-based approaches and in that, cap-and-trade systems. Recently, I've given increasing attention to climate change policy, looking at various means of international cooperation under the United Nations Framework Convention on Climate Change (UNFCCC).

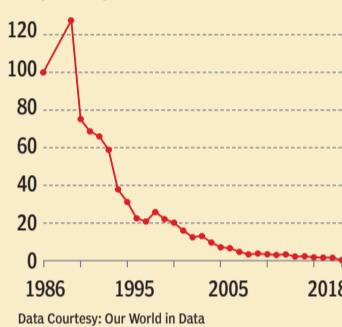


**How were these international conventions around climate change formed?**

The first milestone was in 1992 — this was the United Nations conference on environment and development, sometimes called the Earth Summit, held in Rio de Janeiro, Brazil. Two conventions came from that discussion — the UNFCCC and the UN Convention on Biodiversity. In terms of climate change, the UNFCCC received ratification from most countries. Then there were a series of Conferences of the Parties or COPs. The first one was in Berlin in 1995 and the most recent was in November at Sharm el-Sheikh in Egypt. Along the way, two other extremely important milestones were the Kyoto Protocol which came from the 1997 COP and the Paris Agreement on climate change emerging from the 2015 COP.

**THE MONTREAL PROTOCOL**

This 1987 global pact between 197 countries has caused ozone-depleting substances to decline



Data Courtesy: Our World in Data



**What encouraged countries to join these?**

Over time, what was originally a discussion among only the largest countries of the world grew to include 195 nations on Earth. This is because there are some countries, like the small island states in the Pacific, which face very serious climate change impacts — this fact provided an impetus for a growing number of nations to join this process.

**What are the broad intellectual underpinnings to such path-breaking global treaties?**

For climate change, the most important intellectual foundation is the natural science or the atmospheric chemistry and physics of greenhouse gases leading to global warming — that has been absolutely fundamental. There's also been a lot of attention from economics, as reflected in the Intergovernmental Panel on Climate Change (IPCC). That started with the natural science but increasingly, we see the social science engaged in this now.

**What is your response to critics suggesting environmental pacts are mostly hype?**

I think when critiquing such agree-

ments, people should specify what the alternative is and how it could be more effective. The Paris Agreement actually involves 97% of global emissions from countries which are taking on Nationally Determined Contributions (NDCs) now — that is very important. Adequate scope of participation, one of the essential conditions for success, has been achieved by the Paris Agreement. The other condition is adequate ambition of the individual NDCs. This is still a work in progress but there has been remarkable development here as well. The existing structure for international cooperation is effective.

**There are often conflicting concerns, from contemporary growth to historical responsibility for emissions, etc., raised at these meetings. How are these managed?**

Something that differentiates the UN process on climate change is that from the beginning, there has been a very strong focus on distributional equity. That took the form of the phrase 'common but differentiated responsibilities and respective capabilities' in the original FCCC.

Distributional equity is at the very heart of these international negotiations. This is validated by the attention being given to loss and damage now.

**Are these agreements legally enforceable?**

The Paris Agreement is binding under international law. The specific NDCs of 195 countries are not part of the Paris Agreement and are in a separate registry maintained by the UN. Some people criticise this, saying that means the NDCs aren't binding under international law — in my view, they shouldn't be. Under the Kyoto Protocol, the commitments of the Annex One countries were binding but as a result, the US never ratified this while Canada, Japan, Russia and Australia dropped out.

The Paris Agreement is more subtle and effective because the NDCs become binding not under international but domestic law — if the US, for example, being a representative democracy like India, doesn't act to achieve what has been mandated by Congress, it faces lawsuits from groups which can turn to domestic



**NO LONGER MARGINAL:** From being treated as a fad to being given a seat at the world's high tables, climate activism by youth groups is now a significant force

regulations. That is a very valuable factor. You could ask, what about China which is clearly not a democracy but an autocracy? There, it's really up to the good practices of the leadership — but that remains a very important question.

**What is the role of hope in such cooperation?**

Significantly, we are seeing the rise of youth activism in many countries — this became very prominent in 2019, with a hiatus during the pandemic, but it has re-emerged. I think youth activists are incredibly important — they represent hope for the planet's future.

**SAVING HABITATS**

The United Nations Convention to Combat Desertification (UNCCD), adopted in 1994, is a legally binding agreement linking development to sustainable land management. With 197 members, the UNCCD aims to stop soil desertification by reducing deforestation, chemical-based farming, overgrazing, etc., which degrade soil, causing droughts — since 2000, the number of droughts has risen by 20% — water stress, crop failures and famines globally

The UN Convention on the Law of the Sea (UNCLOS), established in 1994, includes 168+ members. While UNCLOS demarcated national control over waters, as an offshoot, in 2017, the UN voted to consider a legally binding charter on the conservation and sustainable use of biodiversity beyond national jurisdiction — ongoing talks include halting overfishing and creating further marine protected areas (MPAs)

The 1971 Ramsar Convention on Wetlands has 172 members and seeks to conserve wetland habitats, protect biodiversity and achieve sustainable development. Saving species like waterfowl, there are 2,471 Ramsar sites worldwide, with the UK at 175, Mexico at 142 and India at 75, including Odisha's vast Hirakud Reserve, Indore's Yashwanth Sagar, Tamil Nadu's Vadavoor Bird Sanctuary and Maharashtra's Thane Creek

Research: Encyclopaedia Britannica, UNEP, Smithsonian Magazine

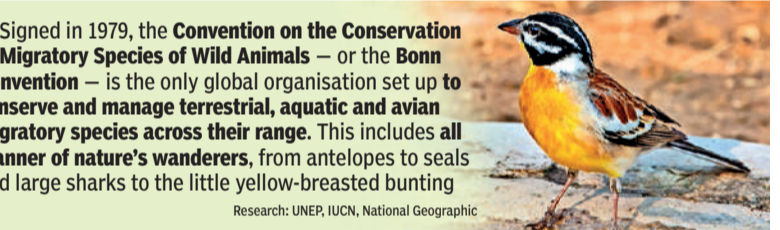


**AN EFFORT TO SHIELD THEM**

CITES or the Convention on International Trade in Endangered Species of Wild Fauna and Flora is an agreement between 183 nations to regulate the global trade of wildlife and wildlife products. Emerging in 1975, it covers about 5,800 species of animals and 30,000 species of plants, classified into three categories, depending on the risk they face — CITES includes elephants (hunted for their ivory), gorillas, pandas, orchids to tiny turtles and mighty lions



Established in 1946, the International Whaling Commission (IWC) aims to prevent the over-hunting of whales. Its moratorium on commercial whaling was opposed by Norway and Japan. Eventually, the IWC established whaling-free sanctuaries in the Indian Ocean and Antarctica. While some countries still pursue whaling — ostensibly for science — many whale populations have benefitted as have dolphin species



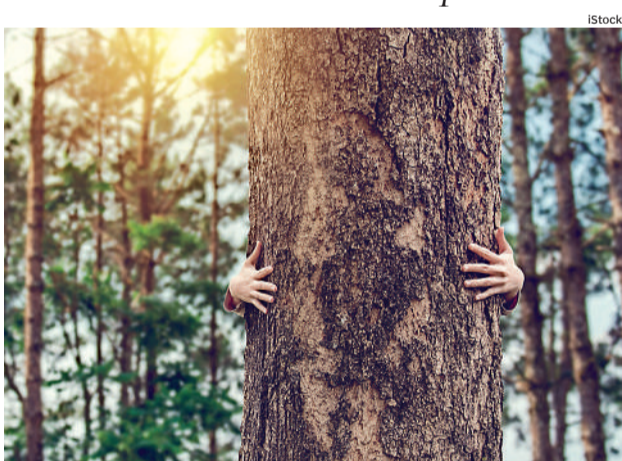
Signed in 1979, the Convention on the Conservation of Migratory Species of Wild Animals — or the Bonn Convention — is the only global organisation set up to conserve and manage terrestrial, aquatic and avian migratory species across their range. This includes all manner of nature's wanderers, from antelopes to seals and large sharks to the little yellow-breasted bunting

Research: UNEP, IUCN, National Geographic

## 'India's Chipko movement changed the world's vision'

**Haripriya Rangan** teaches geography and environmental sciences at the University of Melbourne. She tells Times Evoke about the iconic Chipko accord:

Most of my work studies issues of natural resources and regional development. I've also written a book drawing from my research in the Garhwal Himalayas where I studied forestry and local development as well as how the Chipko movement emerged in that context in the 1970s.



**INSPIRATIONAL TO MANY:** Imagery of the Chipko movement, with hill women embracing trees to save them from logging, grew iconic

The biogeography of Chipko was shaped by both colonial and post-colonial administrations. Under the Raj, there was a steady attempt by the British authorities and the forest department to carve out large parts of forested areas in the middle and upper Himalayas for extraction — their economic interests encompassed ship building, the expansion of the railways, etc. This involved two actions — the first was staking claim to what was commonly used land, demarcating these as reserved and revenue forests to be used by the colonial regime and curtailing local community management and use of these. The second was transforming some of these forests into monocultural plantations like pine to help build the railways, extract turpentine, etc.

alcoholism in their families, etc. A whole series of issues fused together to create this movement, including questions about local people's rights to natural resources, their equality and access in terms of development,

**A PEOPLE'S PACT**

the forest department's answerability, etc. The core issue was how the local economy functioned and the consequences of that — the strands around this were complex and many. Chipko became extremely well-known in the 1980s, partly due to some of its charismatic leaders including Sundarlal Bahuguna, Chandi Prasad Bhatt, Vandana Shiva who spoke about it widely, etc. All this got the attention of people globally. This was significant as through the 1970s, there had been growing concern in many countries over ecological issues. The '70s and '80s was when people started to get interested in grassroots movements led by ordinary women, peasants and others who were struggling over environmental problems and agreed to put up a united front. Chipko became famous in that context — as people spoke about it at multiple platforms, this peaceful

hill struggle had a powerful impact. The imagery of women hugging trees captured the imagination of people worldwide. Chipko's most important message is that social movements can make a difference. Any movement is a struggle but people can mobilise and achieve a lot in terms of challenging the authorities to pay heed to their concerns. The movement itself ended but there is still a challenge towards achieving equitable and sustainable development which takes into account the well-being of local communities. Chipko achieved a lot in terms of making those in power take note of environmental issues — this and the Silent Valley movement in Kerala actually forced the government of the day to create a ministry of environment and forests. But while this pact became almost mythical in its legend, many issues raised by it — from landslides to landscapes devastated by industrial tree growing, excessive tourism, unviable agriculture, etc. — remain. Chipko had an enormous impact on India and the world's environmental vision and imagination. The way it came together, uniting diverse concerns and groups, has important lessons to offer new social movements globally

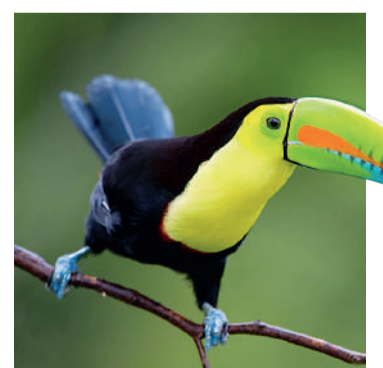
## 'With REDD, the global economy can remunerate nations saving rainforests'

**Geoffrey M. Heal** teaches economics at Columbia Business School. Speaking to Times Evoke, he discusses the revolutionary REDD idea he's co-founded, agreed on in 2022's COP meeting:

The key idea behind the international agreement titled 'Reducing Emissions from Deforestation and Forest Degradation' (REDD) is that forests capture and store huge amounts of carbon dioxide (CO<sub>2</sub>) — this is of great value in a world facing climate change. In industrial economies, people get paid to remove CO<sub>2</sub> from the atmosphere. In the US, for instance, there is a tax subsidy of fifty dollars per ton of atmospheric CO<sub>2</sub> removed. So, countries that maintain large forests are doing something extremely valuable. We wanted to find a way to remunerate countries that preserve forests for the service they provide the world. This is an example of an ecosystem service, where a hectare of tropical forest absorbs 50 to 100 tons of CO<sub>2</sub> per annum. Forests are also huge supports for biodiversity — the vast majority of the world's animals, birds and insects, each with its own



This idea was first broached in the 2005 COP meeting held in Montreal. It was discussed at length in subsequent COP meetings and finally approved at this year's conference in Sharm el-Sheikh, Egypt. REDD will take tangible root now — countries maintaining such forests, found usually in developing economies, can produce carbon credits on the basis of the CO<sub>2</sub> they capture and store. These can be sold on international carbon markets. The buyers would primarily be corporations seeking to reduce their net emissions but governments could also purchase these.



**IT'S MY HOME:** Species in rainforests renew planetary ecosystems we need



**TREASURE THESE TREES:** Tropical rainforests sequester harmful carbon dioxide

natural service, lives in these. Forests thus give us low CO<sub>2</sub> and mitigate the loss of biodiversity. All of this should be adequately valued, so countries are incentivised to protect forests.

**THE FUTURE OF FORESTS**

are meetings held of the technical officials of countries going to this. Here, COP agendas and discussion papers are produced. The Coalition sends its representatives to these meetings to argue for its goals to be included in the COP agenda and produce papers supporting these arguments. The REDD mechanism has only been fully approved in 2022 but one of the countries which has been most active in it is Papua New Guinea (PNG). They have been working hard to document the status of their forests on an annual basis, so they can pro-

duce clear evidence of these resources having grown each year. Claiming credits under the REDD system will require very good satellite imagery of forests with detailed case studies. Most member countries have been accumulating such data, so that they're prepared to claim credits. In the last few years, many American and European companies have announced they want to buy offsets to be carbon-neutral. So, there's a huge increase in the market — we hope REDD offsets will take a significant part of this trade and provide resources to tropical countries. This entire process started in 2005 with Kevin Conrad from PNG and I thinking of this system. It needed to be proposed by a government at a COP meeting though. We talked with Sir Michael Somare, the then PM of PNG and Oscar Arias, the President of Costa Rica then. They felt it was a good idea and proposed it at that year's COP meeting in Montreal. The idea was accepted in principle and referred to several committees for detailed analyses. That took upto 2009. The Bush administration in the US was strongly opposed to the idea which led to more discussions at COPs. In 2015, it was brought up very seriously at the Paris meeting and then at Glasgow until it was finally passed this year — so, it's been a very long process, stretching from 2005 to 2022. Despite all the opposition from diverse quarters, some political as well as some environmental groups who felt paying for forest conservation was somehow disagreeable, the idea of incentives was accepted as a cost-effective and important way of mitigating climate change. So, despite all the challenges, we did get somewhere finally. And now, there's hopefully a good future to look forward to.

**READERS WRITE**

Dear Times Evoke, I really liked TE Evoke's article with Nobel Laureate James J. Heckman (10<sup>th</sup> December)! It brought back reminiscences of our parents and grandparents teaching us ethical fables like Panchatantra! Kudos, TE Evoke!  
—Shashi Sahni, Gurugram

TE Evoke is fantastic! We liked the aesthetic article with James Heckman and the world-class video underlined how success is built at home, so focus on the values to teach kids. That's why we appreciate TOI's Times Evoke!  
—Aruni Gupta, Kolkata

Congrats on TE's Knowledge Series video! It was like attending a talk with a Nobel Laureate! Thanks for always bringing such good-quality matter, TE, keep it up!  
—Dinesh Mane, Mumbai

James Heckman's interview is so useful. Parents are truly the first teachers of a child. If children are taught honesty, empathy, etc., at home, these ingrained values help them develop wisdom which is key to a successful life.  
—S. Ramakrishnasayee, Guest Faculty (Economics), La Chatelaine Junior College, Chennai

The profound TE Evoke interview with Nobel Laureate James J. Heckman offered rich knowledge about how to inculcate success-worthy thoughts in children. Heckman's words of praise for India also had me spellbound! His views on how Indians can thrive are extremely well-timed, given India's rise on the world stage.  
—V. Rajagopal, Chennai

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