



ICAS BLUE CARBON & CLIMATE CHANGE PROGRAM

QUARTERLY

Quarter 2 - 2024



ICAS BLUE CARBON & CLIMATE CHANGE PROGRAM

The ICAS Blue Carbon and Climate Change (BCCC) Program explores new policy pathways for sustainably developing the blue carbon economy and combating climate change.

The goal of this program is to establish a platform for academic exchange between experts around the world to produce tangible policy recommendations for countries to follow together. Most prominently, the program endeavors to find new pathways for multilateral engagement and mediation in areas of competition to promote mutually beneficial cooperation on climate change where possible.

The BCCC Quarterly Team

Research by Zhangchen Wang

BCCC Program Research Assistant Intern

Design & Editing by Jessica Martin

Chief Editor, ICAS Newsletters
Research Associate, ICAS

Advising by Nong Hong

Head, BCCC Program
Executive Director, ICAS



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ICAS BLUE CARBON & CLIMATE CHANGE QUARTERLY

April - June 2024

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Theme of the Quarter: AI's Role in Mending Climate Change

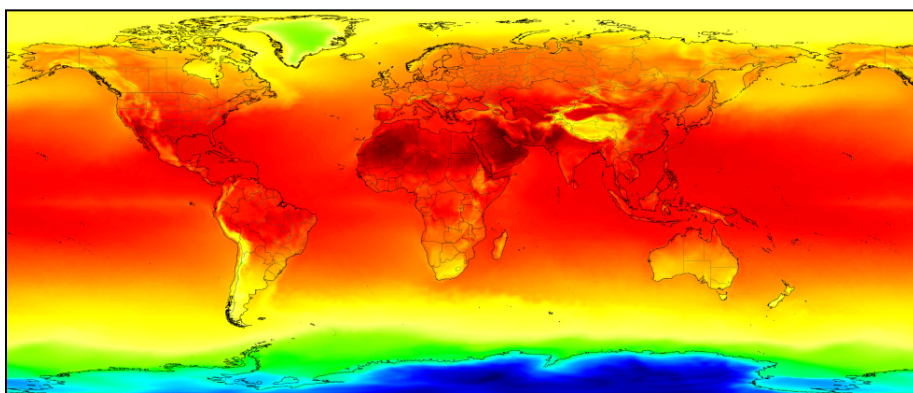
News on AI's Role in Mending Climate Change

Global Initiatives to Empower AI for Climate Action Multiply

The value of artificial intelligence (AI) in addressing climate change has already been broadly acknowledged. Now, recent measures from different regions worldwide are beginning to more distinctly illustrate the efforts to transform AI's potential into real power that could facilitate global climate action. One of the notable developments comes from the Bezos Earth Fund—a US\$10 billion philanthropic initiative launched by Amazon founder Jeff Bezos to support scientists, activists, and organizations working to address climate change and protect the natural world—which launched an “AI for Climate and Nature Grand Challenge” on June 11 with US\$100 million in funding aimed at innovative solutions in sustainable proteins, biodiversity conservation, and power grid optimization. By creating an environment for intersectoral cooperation, this initiative plans to bridge the gap between environmental challenges and cutting-edge AI technologies.

Some parts of the world have even more practical plans for the application of AI. For example, Brazilian utility company EDP plans to invest 30 billion reais (US\$5.8 billion) over the next three years to incorporate AI into their operation system to enhance efficiency and tackle climate-related emergencies. They plan to use AI to streamline their operations in the future, especially in effectively managing the potential disruptions to the power grid posed by extreme weather conditions; a problem that has become increasingly common in Brazil. Additionally, they also aim to enhance the accuracy of predicting potential extreme weather events using AI. Up north in California, Pacific Gas and Electric Company is using AI to enhance wildfire detection and management, addressing one of that region's most pressing threats from climate change. Their AI system analyzes satellite imagery and sensor data to detect early signs of wildfires, allowing for quicker response times. This technology also predicts potential fire hot spots by assessing historical weather patterns and vegetation conditions.¹

These two companies are not the only examples, either. NASA and IBM Research are at the forefront of applying AI to enhance weather and climate studies. Their collaborative efforts focus on developing sophisticated AI algorithms that can analyze vast amounts of environmental data from satellites and ground-based



¹ Image: Global MERRA-2 atmospheric temperature at 650 hPa (approximately 11,500 feet) on July 12, 2016. MERRA-2 Data is used to train the AI foundation model developed in collaboration by NASA and IBM. ([Source](#): NASA Global Modeling and Assimilation Office)

sensors. Among other possibilities, this data is used to refine weather forecasting models and simulate complex climate scenarios with greater precision. On the other side of the world, Samsung and the United Nations Development Programme have partnered for the 'ACT28 AI for Climate Hackathon', an event that aims to find innovative solutions to combat climate challenges with AI, machine learning, and other advanced technologies. This hackathon particularly emphasizes the importance of youth in the future battles against climate change by fostering an environment where more new technologies can emerge and flourish.

Furthermore, more startups are joining this initiative of using AI for climate change: the renowned technology company NVIDIA's Sustainable Futures initiative is supporting over 750 startups using AI for climate tech, including agriculture, carbon capture, clean energy, and environmental analysis. These startups leverage NVIDIA's AI models and Earth-2 platform to advance sustainable solutions. This highlights the other benefit of applying AI to climate issues: seeing the convergence of economic and environmental goals as they support one another in harmony.

Main Relevant Sources:

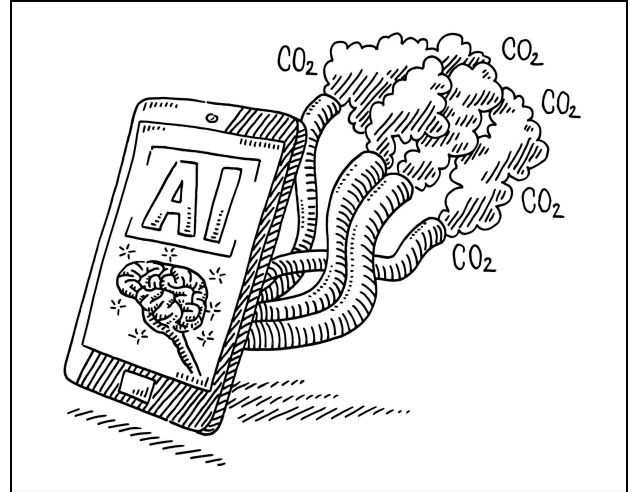
- [Bezos Earth Fund Announces \\$100 Million for AI Solutions to Tackle Climate Change and Nature Loss](#), PR Newswire, April 16, 2024
- [Climate Tech Startups Integrate NVIDIA AI for Sustainability Applications](#), Nvidia, April 22, 2024
- [Brazilian Utilities Firm EDP Uses AI To Respond To Climate Change](#), Forbes, April 29, 2024
- [Samsung and UNDP to leverage frontier technologies to create innovative solutions to tackle climate change challenges through joint 'ACT28 AI for Climate Hackathon'](#), United Nations Development Programme, May 7, 2024
- [NASA and IBM Research Apply AI to Weather and Climate](#), Earth Data, May 22, 2024
- [Climate in Crisis: AI and wildfire detection](#), NBC, June 18, 2024
- [AI Obsession Obscures Bigger Promise of Climate Tech](#), Bloomberg, June 26, 2024

AI's Climate Dilemma: The Cost of High Emissions Amidst the Pursuit of Sustainability

Although AI has great potential in the combat against climate change, it is increasingly evident that the rapid advancement of AI technology is a double-edged sword. While AI offers unprecedented capabilities in data processing and analytics, its escalating energy demands also pose significant challenges for climate change mitigation efforts. According to the International Energy Agency, fueled by the exponential growth in data processing needed for increasingly complex AI models, AI-dedicated data centers are projected to require 90 trillion watt-hours of electricity globally by 2026—a tenfold increase from 2022.

Major tech companies like Microsoft are feeling the environmental impact of their push towards AI. In mid-May, it reported a 30% increase in carbon emissions since 2020, with a big portion of it associated with the company's AI development. This surge obviously complicates Microsoft's—and many other AI enthusiasts'—ambitious goal to be carbon negative by 2030. In response to these challenges, companies such as Salesforce are advocating for more rigorous regulations around AI emissions, urging a mandatory disclosure of carbon footprints related to AI operations. Similarly, there is a growing call for technology firms to reckon with their energy use as AI demands continue to increase.

Moreover, the rising demand for electricity driven by AI not only increases greenhouse gas emissions but also places considerable stress on the global power grid. In regions like the central area of the U.S. state of Washington, the demand for electricity by tech giants has even spurred investments in experimental energy solutions like nuclear fusion, though these technologies are still unproven. Consequently, some regions have been forced to delay the retirement of coal-fired power plants, leading to an increase in fossil fuel use at a time when reducing emissions is most needed.²



This expanding carbon footprint of AI underscores a crucial paradox: the technology that holds tremendous potential to revolutionize our approach to managing and mitigating climate change is simultaneously contributing to it. Companies are increasingly aware of this and are investing in research to mitigate these impacts. This dual impact presents a significant challenge, demanding immediate and sustained action to ensure that AI's role in our future aligns with global sustainability goals.

Main Relevant Sources:

[Data centers fuel AI and crypto but could threaten climate, experts say](#), ABC News, April 20, 2024

[Salesforce Calls for AI Emissions Regulations as Concerns Grow Over Tech Sector's Carbon Footprint](#), *The Wall Street Journal*, April 22, 2024

[How Bad Is A.I. for the Climate?](#), *The New York Times*, May 6, 2024

[Microsoft's AI Push Imperils Climate Goal as Carbon Emissions Jump 30%](#), *Bloomberg*, May 15, 2024

[Microsoft Wanted to be Carbon Negative. Then It Went Big on AI](#), *Bloomberg*, May 23, 2024

[AI's looming climate cost: Energy demand surges amid data center race](#), *Nikkei Asia*, June 12, 2024

[AI is exhausting the power grid. Tech firms are seeking a miracle solution.](#), *The Washington Post*, June 21, 2024

[Big Take: AI Power Needs Threaten Climate Progress](#), *Bloomberg*, June 24, 2024

Government Statements & Actions on AI's Role in Mending Climate Change

Political figures around the globe are openly recognizing artificial intelligence's (AI's) potential in addressing climate change. They emphasize the importance of international governance and regulatory measures to ensure the safe and responsible use of AI technologies. AI is seen as a powerful tool for optimizing energy use, combating climate change, and monitoring biodiversity. However, there is also a shared concern about the risks of misinformation and inequality associated with AI, since immature AI may provide misleading and incorrect conclusions, and the development costs of AI are unaffordable for many underdeveloped countries.

- On May 2, Prime Minister Kishida of Japan emphasized AI's potential to address climate change during his speech at the Generative AI Side Event. He highlighted the need for international governance to ensure that the use of AI is safe, secure, and trustworthy.

² Image: Hand-drawn vector drawing of an AI Technology Carbon Emissions Problem. (Source: Getty Image, Royalty-Free)

- On May 15, the U.S. Senate Majority Leader Chuck Schumer mentioned AI's potential to address climate change among all the other priorities during his remarks on the release of the Bipartisan Roadmap for AI Policy. He also emphasized the importance of implementing regulatory measures to manage AI-associated security risks.
- On May 29, UNDP Resident Representative Alessandro Fracassetti discussed AI's potential in advancing Sustainable Development Goals (SDGs) during a panel discussion. He emphasized AI's role in addressing climate change, improving decision-making, and driving innovation. More specifically, Fracassetti highlighted AI's ability to optimize energy use, enhance medical diagnostics, and monitor biodiversity, while also cautioning about the risks of misinformation and inequality.

In the last quarter, U.S. government ministries and departments seem to have been the most active in exploring AI's role in addressing climate change. This is unsurprising to an extent the United States' technological advancements and the Biden-Harris administration's recent green policy emphasis. These initiatives underscore the United States' focus on leveraging AI to enhance energy transition and improve climate-related decision-making processes.

- As part of the U.S. President Biden's Investing in America agenda, in April the Department of Energy issued *AI and Energy: Opportunities for a Modern Grid and Clean Energy Economy*, which is the first-ever report on AI's near-term potential to support the growth of America's renewable energy and clean energy economy.
- On May 6, the White House Office of Science and Technology Policy and the National Oceanic and Atmospheric Administration hosted a joint workshop on the potential for artificial intelligence to transform weather prediction amidst continued bouts of extreme weather.

In terms of multinational institutions and conferences, the United Nations has emphasized two major issues: the investment in AI and information security of AI. Most countries have already recognized AI as a critical future topic and are more regularly organizing relevant international conferences to address present or future concerns and applications. Although climate change is only a small part of AI applications, its importance has not been overlooked in these international discussions.

- On May 9, the United Nations hosted the Science, Technology, and Innovation Forum and emphasized AI's potential to address climate change. The speakers highlighted the need for increased investment and global collaboration to leverage AI technologies for sustainable development.
- On May 21, ten countries and the European Union signed the Seoul Declaration at the AI Seoul Summit in South Korea. The declaration reaffirmed the global commitment to supporting and promoting advancements in AI technologies, recognizing the potential of AI to address significant global challenges including climate change.
- On June 24, the United Nations launched the Global Principles for Information Integrity, aiming to combat misinformation and promote accurate information worldwide. The principle affirms that AI applications must be designed, deployed and used safely, securely, responsibly and ethically. AI, it explains, should not be used to spread misinformation and undermine climate action.

Main Relevant Sources:

[AI and Energy: Opportunities for a Modern Grid and Clean Energy Economy](#), U.S. Department of Energy, April, 2024
[Speech by Prime Minister KISHIDA Fumio at the Generative AI Side Event](#), Prime Minister's Office of Japan, May 2, 2024
[Speakers Focus on Potential of Artificial Intelligence to Address Climate Change, as Science, Technology and Innovation](#)

[Multi-stakeholder Forum Opens](#), United Nations, May 9, 2024

[Readout: Biden-Harris Administration Workshop on Artificial Intelligence and Weather Prediction](#), The White House, May 10, 2024

[Majority Leader Schumer Floor Remarks On The Release Of The Roadmap For AI Policy By The Senate Bipartisan Senate AI Working Group](#), U.S. Senate Democrats, May 15, 2024

[Seoul Declaration for safe, innovative and inclusive AI by participants attending the Leaders' Session: AI Seoul Summit, 21 May 2024](#), Government of the United Kingdom, May 21, 2024

[UNDP Resident Representative Alessandro Fracassetti's Speech at the Panel discussion: Harnessing AI for Sustainable Development Goals in the Arab Region at WSIS](#), United Nations Development Programme, May 28, 2024

[Press Release | UN launches recommendations for urgent action to curb harm from spread of mis- and disinformation and hate speech](#), United Nations, June 24, 2024

Third-Party Analyses & Data on AI's Role in Mending Climate Change

Currently, only two concepts are widely agreed upon concerning the role of AI in addressing climate change. First, AI provides substantial computational power that aids research and planning efforts to combat climate change. Second, the operation of AI itself as it currently exists consumes significant amounts of energy, leading to additional carbon emissions. Thus, finding a balance between these two aspects—maximizing AI's benefits while minimizing its negative environmental impact—is a critical topic for stakeholders involved in global climate change initiatives.

- An opinion piece published in the South China Morning Post argues that Southeast Asia's rapid AI adoption must consider the environmental impacts, as increased energy consumption and carbon emissions could undermine climate goals.
- In his commentary for *The Hill*, Philippe Benoit wrote about the necessity for AI to achieve net-zero emissions in the fight against climate change. He argues that AI's substantial energy requirements must be managed to prevent it from resulting in more net greenhouse gas emissions.
- In an opinion piece for Earth.org, Chris Hocknell explored the energy demands of AI and its importance in combating climate change. He contends that, although AI consumes substantial energy and water, its benefits in facilitating the green transition and improving energy efficiency are crucial and justify its use.
- A *New York Times* article directly explores how the industry is overlooking the "power-hungry data centers" that they say will "largely run on fossil fuels."
- An article published on MIT Sloan examines how AI-generated visuals can enhance support for sustainable policies. The author explains that showing people AI-created images of greener, less car-dependent cities significantly increases their approval for green urban development projects.
- A *Global News* article also highlights the concerns about the electricity demands of AI, pointing out its particular importance when developed countries like Canada start to expand their AI projects since they usually have more energy and sources to spend on developing AI.
- In his opinion piece for *China Daily*, Ozzeir Khan from the Asian Development Bank highlights that sector-specific AI models, such as those for agriculture and climate monitoring, can significantly enhance climate resilience and sustainability efforts in their respective fields.
- A *MIT Technology Review* article examines the energy consumption of AI and argues that, while AI's rising electricity demands are concerning, the focus should be on meeting this demand with renewable

energy to mitigate its environmental impact.

- A commentary published by *Fox News* explores how AI can both help and hurt the fight against climate change. While AI offers significant tools for environmental management, its high energy consumption from data centers can exacerbate greenhouse gas emissions unless mitigated by advancements in energy efficiency and renewable sources.
- A World Economic Forum article examines how AI can take climate research from the lab to real-world applications. AI's capabilities in data organization, model simplification, and technology prototyping, in detail, are crucial for translating research into practical climate solutions.
- An opinion published on *Bloomberg* highlights MIT professor Priya Donti's views that AI can significantly support climate applications by optimizing power grids, improving weather forecasts, and enhancing sustainable practices, despite its energy-intensive nature.
- An analytical article published by Appinventiv believes that AI can significantly improve climate modeling, energy efficiency, carbon capture, and disaster forecasting.
- In their article for *Scientific American*, the authors discussed the potential of AI in combating climate misinformation. They praised the work of researchers from Australia and the United Kingdom who developed an AI model capable of detecting and debunking false climate claims, helping to counter the spread of misinformation on social media platforms.
- An article in *Euronews* stressed the importance of integrating climate change into AI diplomacy. The piece criticizes tech companies for overlooking AI's environmental impact and underscores that AI's role in climate action really depends on how it is regulated and applied.

Relevant Sources:

[In embracing AI, Southeast Asia must consider sobering climate costs](#), *South China Morning Post*, April 2, 2024

[AI policy can't ignore climate change: We need net zero AI emissions](#), *The Hill*, April 10, 2024

[AI Is Energy Intensive. For Battling Climate Change, It Is Worth It](#), *Earth.org*, April 16, 2024

[Sustainable policies get a boost from AI-generated visuals](#), MIT, April 29, 2024

[How Bad Is A.I. for the Climate?](#), *The New York Times*, May 6, 2024

[As Canada eyes AI growth, could electricity demands fuel climate change?](#), *Global News*, May 9, 2024

[How AI models can fight climate change](#), *China Daily*, May 21, 2024

[AI is an energy hog. This is what it means for climate change.](#), *MIT Technology Review*, May 23, 2024

[How AI can help \(and hurt\) climate change](#), *Fox 10*, May 28, 2024

[Post breakthrough: How AI can lift climate research out of the lab and into the real world](#), World Economic Forum, May 29, 2024

[What Can Artificial Intelligence Really Do to Fight Climate Change?](#), *Bloomberg*, May 30, 2024

[Harnessing the Power of AI to Combat Climate Change](#), Appinventiv, June 7, 2024

[Climate Misinformation Is Rampant. AI May Be Able to Stop It](#), *Scientific American*, June 8, 2024

[AI diplomacy ignores greatest existential risk of all: Climate change](#), *Euroviews*, June 18, 2024

ICAS Commentary

Data on Empowering AI for Climate Action

By Zhangchen Wang

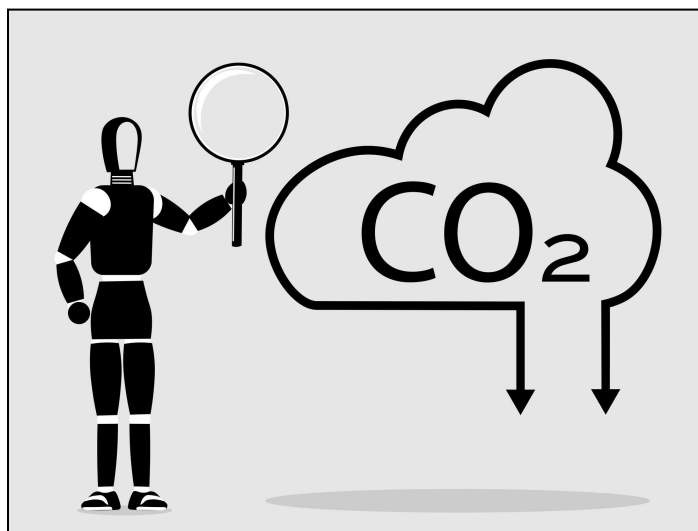
June 27, 2024

The power of AI in data processing and analysis has already been widely acknowledged. In spite of its imperfections, utilizing this crucial capability effectively can help humanity make informed decisions, predict future scenarios, and address pressing challenges. Notably, within the global context of climate change, the potential of AI to assist in addressing this challenge deserves special attention.

AI can enhance humans' understanding of climate change and facilitate climate change mitigation efforts through many different ways. After having a precise understanding of greenhouse gas emission levels of high emission companies and the carbon sequestration capabilities of natural resources and carbon capture technologies, AI could offer advice regarding emission reduction to scientists and business owners. Similarly, AI measures the changes in icebergs, forests, and many other environmentally sensitive issues [thousands of times](#) faster than the human eye after training them with sufficient past [satellite and other images](#), offering critical insights that contribute to the efficiency of environmental protection efforts. AI can also [forecast](#) future climate trends with predictive modeling, improving preparedness for extreme weather events and climate change mitigation strategies.

However, AI will be much less effective or even make mistakes in the absence of sufficient existing data for computation and analysis since the accuracy of AI [almost entirely depends on](#) the accuracy and completeness of the data it receives. Without large datasets to train AI models, it may make biased or incorrect predictions. This is particularly worrisome for climate predictions as humans themselves often do not know the correct answers.³

Therefore, it is necessary to help AI to obtain sufficient data to guarantee its accuracy in addressing issues related to carbon reduction and environmental protection. So far, it is [acknowledged by various stakeholders](#) that the existing climate-related data is at least partially insufficient, with [entity-level data and scope 3 emission data](#) being the ones that are most difficult to access or have not been collected at all. Indeed, AI could potentially help companies save costs through optimized grids and supply chain management in existing production and transportation models. However, for most companies, collecting data on carbon emissions is time-consuming, costly, and technologically challenging, especially regarding



³ Image Source: Getty Images, Royalty-Free

indirect carbon emissions. Thus, the unguaranteed economic returns are insufficient to truly incentivize business owners. Carbon emission is also not yet a primary consideration for consumers. Under the premise of voluntary collection, it is difficult to provide sufficient data to train AI algorithms.

As a result, regarding the issue of climate-related data acquisition, more detailed institutional arrangements at the national and international level are needed to ensure that problems which many companies and individual researchers are unwilling or struggling to address can be properly resolved. Governments with sufficient resources and funds should put more efforts on the promotion of accurate and affordable emission calculation measures. Countries should also strengthen cooperation, standardization, and data sharing regarding climate data used for AI algorithms.

Firstly, mandatory sustainability reporting should replace voluntary carbon emissions monitoring as the new norm and standard. Aside from a few industries in a few countries that are subject to regulation of [emission trading systems](#) (ETS), not many existing companies proactively measure their carbon emissions. The smooth operation of the ETS demonstrates the feasibility and value of carbon emissions monitoring to climate change mitigation. Governments need to provide more support to industries by supplying [Continuous Emissions Monitoring Systems](#) for accurate emissions measurement and by mandating regular reporting to ensure transparency in emission levels.

The other benefits of this measuring and reporting system is that there will be a comprehensive understanding of emission from different industries. Sometimes the direct emission from one industry could be the indirect emission of another, which falls into the often-ignored [scope 3 emission data](#). Comprehensive statistics ensure that when providing AI with detailed data on emissions across the entire industry chain, double counting caused by separate calculations will not happen, preventing AI from making biased conclusions.

Secondly, considering the cost and challenges during the acquiring of certain emission data, countries should collaborate more on information collection and adopt a more open-minded approach to information sharing. The need for cooperation is particularly salient when it comes to the acquisition of satellite and aerial imagery and data. Scientists can analyze environmental problems in designated areas through aerial images, thereby proposing more precise environmental protection plans for the future. With its precise and efficient image analysis capabilities, AI can significantly enhance the efficiency of imagery data analysis. Some satellite images can also reflect the [evolution of greenhouse gasses](#), providing important reference for AI to assist in emission reduction efforts. However, not every country has the capability to obtain satellite images, especially many developing countries with natural sites that need protection.

Since addressing climate change is a common challenge for all humanity, an international information-sharing mechanism is urgently needed. Countries with relevant information should provide their non-confidential climate change-related data to those nations that have difficulty obtaining such information or collaborate with them to develop AI algorithms that can effectively utilize this data. In return,

the countries receiving assistance should make greater contributions in other areas, such as investments in combating climate change.

Thirdly, in addition to information sharing, implementing global standards for climate change data collection and categorization could further improve the efficiency of AI in combating climate change. The existing systems for climate data are somewhat fragmented. For example, the European Union's (EU's) approach under its [Taxonomy for Sustainable Activities](#) is highly extensive and detailed and covers a broad spectrum of objectives. On the other hand, [China's taxonomy](#) has different focuses, prioritizing energy and resource efficiency while also covering other major issues. The two have ever had a unified calculation standard. Not to mention that the United States has no clear regulation in this area. These variations can create barriers to developing unified AI-driven solutions as AI models trained on data from one region might perform poorly when applied to another due to these underlying differences in what data is collected and how it is categorized.

To address these challenges, major actors in both AI and climate affairs like the EU, China, and the U.S. should collaborate more closely by making more unified standards for their respective climate data taxonomies to ensure better compatibility and interoperability of information. The ongoing efforts in the EU to develop a [Common Ground Taxonomy under the International Platform on Sustainable Finance](#) are a step in this direction, but more needs to be done.

In conclusion, the effective utilization of AI in combating climate change depends on the availability and accuracy of comprehensive climate data. By adopting mandatory sustainability reporting, enhancing international cooperation for data sharing, and standardizing global data collection protocols, we can equip AI with the tools necessary to make more accurate predictions and informed decisions. This will not only optimize our climate mitigation strategies but also ensure a unified global approach to a challenge that affects us all.

This commentary was [originally](#) released on the ICAS website on June 27, 2024 as part of the ICAS Blue Carbon & Climate Change (BCCC) Program.

This season's Theme of the Quarter on AI's Role in Solving Climate Change was primarily researched and written by Zhangchen Wang, Part-Time Research Assistant at the Institute for China-America Studies.

This Season's Global Climate Affairs

Issues & Updates on Blue Carbon

Seagrass planted to tackle global warming

Friday, April 12

Source: [BBC](#)

[The United Kingdom]

In Cumbria, England, the Wildlife Trust is restoring seagrass meadows to combat global warming, supported by a £141,000 project funded in part by the Environment Agency. Dwarf Eelgrass, known for its carbon capture capabilities, is being replanted in the Walney Channel. This restoration not only helps in carbon sequestration but also supports local biodiversity by providing habitats for juvenile fish and other marine life.

New film drops beat for 'climate heroes'

Thursday, April 18

Source: [Conservation International](#)

[Global, United States]

A film, "Blue Carbon: Nature's Hidden Power," executive-produced by Conservation International, premiered on CNN on April 21. This documentary explores the crucial role of coastal and marine blue carbon ecosystems in capturing and storing carbon. It is also one of the first films that underscores the importance of protecting blue carbon ecosystems to sustain their carbon-sequestering capabilities.

Brazil boosts protection of Amazon mangroves with new reserves in Pará state

Friday, April 19

Source: [Mongabay](#)

[Brazil]

Brazil has significantly increased the protection of its Amazon mangroves by creating two new reserves in Pará state. This initiative places nearly all of Pará's coastal mangroves under federal protection, covering an additional 74,700 hectares. The move is celebrated as a major step for biodiversity conservation, helping local communities sustain their traditional livelihoods while also contributing to climate change mitigation.

Battling climate change, Japan looks to seagrass for carbon capture

Friday, April 26

Source: [Reuters](#)

[Japan]

In Yokohama, Japan, volunteers are planting eelgrass to combat climate change by harnessing its carbon capture potential. This initiative is a part of Japan's national strategy to utilize marine vegetation for carbon

neutrality by 2050, underscoring the significant carbon absorption capability of seagrass along its extensive coastlines. Projects like this continue to make Japan a leading global advocate for protecting blue carbon ecosystems and understanding blue carbon capture.

Academic collaboration supports blue economy workforce

Monday, April 29

Source: [The Fish Site](#)

[United States]

The Blue Economy and Climate Action Pathways (BECAP) conference, led by 13 California colleges and institutes, aims to develop the blue economy workforce in Los Angeles by aligning academia and industry to address emerging employment needs in ocean-related sectors. Supported by a US\$1.1 million grant, BECAP focuses on creating educational and career pathways to enhance workforce readiness in response to climate change, particularly emphasizing subjects related to aquaculture and renewable energy.

Plans for 'world's largest coastal regeneration project' revealed in Dubai

Tuesday, May 14

Source: [CNN](#)

[United Arab Emirates]

Sustainable city developer URB has unveiled plans to plant over 100 million mangroves along 70 kilometers of Dubai's coastline by 2040. URB aims to create the world's largest coastal regeneration project, and seeks to absorb 1.2 million metric tons of CO² annually. The project is in its research phase, focusing on pilot studies to fine-tune the planting designs and includes technologies like drone reforestation and remote sensing to monitor and manage mangrove health.

Blue carbon doubts cloud net-zero ambitions, scientist warns

Monday, May 20

Source: [Digitimes Asia](#)

[Global, Australia]

While protecting blue carbon ecosystems is crucial for carbon storage, Dr. Bradley Eyre from Southern Cross University warns of uncertainties that could undermine their effectiveness in achieving net-zero emissions. Variability in carbon burial rates and greenhouse gas emissions can significantly reduce the potential climate benefits. Additionally, not all carbon processes in coastal ecosystems qualify as blue carbon. Dr. Eyre suggests that more research is needed to accurately assess the role of blue carbon in offsetting emissions.

Half of world's mangrove forests are at risk due to human behaviour – study

Thursday, May 23

Source: [The Guardian](#)

[Global]

According to a comprehensive study by the International Union for Conservation of Nature (IUCN), half of the world's mangrove forests are at high risk due to human activities. Key threats include rising sea levels, agricultural expansion, coastal developments, and pollution. The study suggests using the IUCN's "red list" tools for ecosystems to identify clear pathways that can reverse mangrove loss.

Marriott International working to better environment

Sunday, June 9

Source: [Shanghai Daily](#)

[China]

Marriott International has partnered with the China Environmental Protection Foundation to enhance environmental sustainability in China. This collaboration focuses on expanding seagrass beds, improving campus drinking water safety, and protecting black soil in various regions, mainly in the Lingshui Li Autonomous County and Dongzhai Port Mangrove Nature Reserve of Hainan Province.

XTCC collaborates with industry partners on blue carbon initiative

Monday, June 10

Source: [Carbon Herald](#)

[Canada]

Climate-controlled transportation company XTCC announced a partnership with Estonian swimming champion and ocean advocate Lady Merle and Silvio Pupo-Casco of Logos Capital Group to celebrate World Ocean Day. The collaboration aims to enhance investment in blue carbon projects like mangrove conservation. XTCC also plans to create a bridge between blue carbon projects and the capital markets, enabling an asset class for the Beyond Net Zero world.

Japan looks to 'blue carbon' to cut emissions — and restore its coasts

Sunday, June 23

Source: [The Japan Times](#)

[Japan]

Japan is intensifying its efforts in "blue carbon" initiatives to cut emissions and restore coastal ecosystems. This involves integrating carbon captured by seaweed and seagrass into the national emissions inventory, marking a significant step towards Japan's net-zero emissions goal by 2050.

Multilateral Affairs & Climate Diplomacy

China's Electric Vehicle Industry is Facing New Global Challenges

The Short Story: The United States has imposed a 100% tariff on electric vehicles made in China, virtually rejecting Chinese electric cars from entering the U.S. market in a move that has been met with strong opposition from China. The European Union is also on their way to impose additional tariffs on Chinese electric vehicles.

Why It Matters: The Chinese electric vehicle industry is not only a signature move of China's transition to green energy and China's development of new productive forces, but is also a mark of China becoming an increasingly competitive player in the global automotive industry. Stakeholder opinions from around the globe differ greatly about the soundness of the policy choices of the U.S. and EU. It remains to be seen whether tariffs are an effective measure to promote domestic electric vehicle industry in the West, but regardless of their industry implications, they will slow down the world's holistic green transition.

The Full Feature Story: On May 14, 2024, U.S. President Joe Biden announced an increase in tariffs on Chinese electric vehicles (EVs), raising the import tariff from 25% to 100%. Few Chinese EVs had yet been sold in the United States, and the radical increase of tariffs has all but entirely discouraged Chinese EV makers from entering the U.S. market for the foreseeable future. This decision reflects growing U.S. concerns about the threat of cheaper Chinese EVs to its domestic auto industry. Even with the initial 25% tariff in place, the U.S. remained worried about the potential flood of Chinese EVs that could pose, according to American manufacturers, an "existential threat." The Biden administration claims that the additional tariffs are intended to protect the billions of dollars invested in the U.S. EV industry, and to support domestic jobs and the development of domestic EVs. However, some experts argue that the tariffs only offer temporary protection and do nothing to promote long-term competitiveness of U.S. EVs, especially in its expansion into the global market. Moreover, as domestic competition and foreign market tariffs pressure Chinese automakers to advance in EV technology, U.S. EV brands might not be as incentivized to catch up given the tariff protection.

The EV situation in Europe is even more clouded. Although less intense, the EU announced on June 12 that it will adopt measures similar to those of the U.S., with plans to impose temporary tariffs ranging from 17.4% to 38.1% on Chinese-made EVs due to "unfair subsidies and low production costs" that poses threats to the European auto industry. However, there is significant internal division within Europe over whether or not to implement this decision. Many European automakers and their partners are reliant on the Chinese market and deeply integrated into the China-based supply chains. Accordingly, they fear retaliatory tariffs from China, and thus oppose tariffs on Chinese EVs. Countries like Germany, Sweden, and Hungary are particularly outspoken, fearing that the tariffs could bring broader and more profound negative impacts on their holistic economic relationships with China. The European Commission still needs to find a delicate balance among protecting domestic enterprises, promoting fair competition, and

avoiding an escalation of trade conflicts. Meanwhile, some scholars believe that increasing the cost of Chinese imports will dampen consumer enthusiasm for purchasing EVs while the development of local EVs is still immature. Some thus fear that high tariffs like this will significantly slow down Europe's green transition. Meanwhile, one *Reuters* survey conducted in early-June in Japan states a slight majority of Japanese firms saw no need for Japan to impose similar measures.

China has expressed strong opposition to the tariffs imposed by the United States and the European Union, criticizing these actions as protectionist and contrary to the principles of free trade. Among other points, Beijing argues that these tariffs disregard World Trade Organization rules and could lead to further global trade conflicts, undermining the international cooperation necessary to combat climate change. However, since the U.S. market has very limited Chinese EV imports, Washington's tariffs have virtually no practical impact on Chinese EV companies at present. Nonetheless, because Chinese EVs hold over 15% of the market share in EU countries, potential EU tariffs could have a significant negative impact on Chinese manufacturers. To prevent the imposition of these tariffs by the EU, China has indicated that it does not rule out the option of taking retaliatory trade measures, including conducting anti-dumping investigations on some EU goods to counteract the additional tariffs on Chinese electric vehicles. Thus, this history-in-the-making—along with its short- and long-term ramifications on the global climate crisis—is still very much in flux.

Sources:

- [5 takeaways from Biden's tariff hikes on Chinese electric vehicles](#), *NPR*, May 14, 2024
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- [Biden's EV tariffs may not be enough to stave off the threat of Chinese vehicles in the U.S.](#), *CNBC*, May 15, 2024
- [POLITICS Biden's Chinese EV tariffs don't address national security concerns](#), *CBS News*, May 17, 2024
- [China gears up to make a deal with Europe as EV tariffs loom](#), *Reuters*, May 29, 2024
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- [Europe to Hit China With EV Tariffs That Its Own Automakers Oppose](#), *The Wall Street Journal*, June 12, 2024
- [China targets Europe's farmers, and not its automakers, in response to EU tariffs on electric cars](#), *AP News*, June 18, 2024
- [Most Japan firms see no need to follow the U.S. with tariffs on China. Reuters poll finds](#), *Reuters*, June 19

Ocean Temperatures Hit Record Highs for 13 Consecutive Months

The Short Story: Reportedly due to the combined impacts of climate change and the El Niño phenomenon, until June 2024, average sea temperatures have remained at historical highs for 13 consecutive months. This trend shows no signs of abating at present and introduces significant uncertainties for future weather patterns, marine biodiversity, and the global climate system.

Why It Matters: Swelling ocean temperatures act as fuel for a more intense and active hurricane and typhoon season, exacerbate mass coral bleaching, and threaten global marine biodiversity. This ongoing shift not only disrupts marine life, their ecosystems, and their natural patterns, but also amplifies extreme

weather events across the globe and rising sea levels, directly affecting millions of people along the coast with unprecedented economic challenges.

The Full Feature Story: From April 2023 to May 2024, the world's oceans have not only been warming but have consistently shattered surface temperature records. This prolonged heat has been primarily driven by human-caused climate change, though its severity has been compounded by the active El Niño phenomenon. According to recent studies from NOAA and the Copernicus Climate Change Service, these elevated temperatures are transforming our planet's climate system, making extreme heat waves and hurricanes (referred to as typhoons in the Pacific Ocean) more frequent and intense. Scientists warn that this warming acts like a turbocharger for storms, providing them with more energy and leading to higher wind speeds, greater precipitation, and extended durations of storms that will significantly impact coastal communities and marine environments alike.

Meanwhile, the ecological impacts are equally alarming. Coral reefs, often referred to as the rainforests of the sea, are suffering under the stress of warmer waters. Record-breaking heat has triggered the most severe coral bleaching events seen in decades, affecting reefs across the Atlantic, Pacific, and Indian oceans. Due to stress caused by warmer water, corals expel the algae that live in their tissues and provide them with food, thus leading to coral bleaching and what is essentially their strangulation. This loss not only leads to a whitening of corals but also to a significant reduction in their growth rates, reproductive capacity, and resistance to diseases, which can culminate in widespread die-offs of the reefs themselves and, thus, the countless sea life that rely on coral reefs for survival. With how slowly coral reefs are to take form—even under dedicated human care—their recovery from bleaching is imperative.

Even outside of coral reef ecosystems, the warming oceans have broader implications for marine life. Increased temperatures have led to shifts in the distribution of marine species, with some cold-water species being pushed towards cooler waters and tropical species expanding their range of occupation. Among other spiraling effects, these temperature shifts can alter predator-prey relationships, disrupt migratory patterns, and lead to a mismatch in the timing of breeding activities, which can further strain ecosystem resilience. It will also directly affect the hundreds of millions of people who rely on these ecosystems for food, income, and cultural value; some of whom have permanently moved away from their homelands in recent months due to rising sea levels and changing marine life.

The ongoing trends signal a clear warning to act: to reduce greenhouse gas emissions and protect our oceans, upon which so much of life on Earth depends. These trends—easy for developed countries in particular to underestimate or outright neglect—underscore the urgent need for global policy interventions and international cooperations to slow the pace of ocean warming and mitigate its impacts on weather patterns, marine ecosystems, and global biodiversity before a reversal becomes impossible.

Sources:

[Ocean Heat Has Shattered Records for More Than a Year. What's Happening?](#), *The New York Times*, April 10, 2024
[Record-breaking ocean heat triggers massive coral reef bleaching](#), *PBS News*, April 18, 2024

[Oceans' record heat streak reaches 13 months](#), *Axios*, May 8, 2024

[Hurricanes, heatwaves and rising seas: The impacts of record ocean heat](#), *BBC*, May 9, 2024

[Global temperature record streak continues, as climate change makes heatwaves more extreme](#), World Meteorological Organization, May 15, 2024

[Ocean temperatures surge, threatening worst coral bleaching event in history, scientists say](#), *FOX*, May 17, 2024

[Unprecedented ocean temperatures make this hurricane season especially dangerous](#), *USA Today*, June 2, 2024

More on Multilateral Affairs & Climate Diplomacy:

- A new study estimates that climate change will reduce global income by about 19% over the next 25 years compared to a non-warming scenario, with the poorest regions, which are least responsible for emissions, suffering the most. By 2049, the economic impact is projected to reach US\$38 trillion annually, potentially doubling by 2100. ([AP News](#), April 17)
- Intense heat waves and fatal floods are affecting Asia, with temperatures surpassing 40°C in India, Bangladesh, and Thailand, and severe floods in China and Pakistan. The World Meteorological Organization attributes these extreme weather events to climate change and the El Niño phenomenon. ([The Guardian](#), April 26)
- In late April, the G7 ministers met in Turin, Italy, to discuss climate change, with experts urging them to end fossil fuel use. France pushed to phase out coal by 2030, while Japan, Germany, and Italy resisted due to gas dependency. Eventually, the leaders reached a deal and agreed to shut down their coal-fired power plants in “the first half of the 2030s.” ([France24](#), April 29; [Reuters](#), April 30)
- EU regulators have launched an investigation into 20 airlines for potentially misleading greenwashing practices. The European Commission identified misleading green claims regarding carbon offsetting through environmental projects or sustainable jet fuels. ([Al Jazeera](#), April 30)
- A report found that renewables accounted for over 30% of global electricity in 2023, driven by rapid growth in wind and solar power. The International Energy Agency also reported a 70% increase in investment in solar panels, wind turbines, batteries, and other green technologies last year. ([The Guardian](#), May 7)
- Microsoft and Stockholm Exergi have entered a 10-year agreement on carbon removal, utilizing Stockholm Exergi's BECCS project at Värtan, Stockholm. Stockholm Exergi will provide Microsoft with over 3.3 MT of carbon removal certificates, making it the largest of its kind globally. ([Carbon Credit](#), May 21)
- Small Island Developing States (SIDS) are uniting to advocate for debt relief and increased climate finance at the upcoming COP29 climate summit. This plan includes the new Global SIDS Debt Sustainability Support Service that aims to restructure debt and raise climate finance. ([Reuters](#), May 24)
- Speaking at an international meeting in New York City, United Nations Secretary-General Antonio Guterres expressed concerns over global fossil fuel production and called out for a cut to reduce carbon dioxide emissions and a ban for any companies from advertising fossil fuels. ([Al Jazeera](#), June 5)

- UN climate chief Simon Stiell expressed concern over the lack of progress at midyear climate talks in Bonn, Germany, ahead of COP29 in Azerbaijan this November. Stiell emphasized the need for substantial decisions and bridging divides regarding climate finance to achieve ambitious outcomes at COP29, especially as the existing US\$100 billion annual target expires in 2025. ([Le Monde](#), June 14)
- At their ministerial meeting in Apulia, Italy, G7 leaders pledged to expedite the phasing out of fossil fuels this decade, aiming to reach net-zero status by 2050; but criticisms from activists remain as the pledge lacks concrete commitments. ([Reuters](#), June 14)
- At the end of the third OPEC Fund Development Forum, a global South-South cooperation event in Vienna, the Fund provided substantial finances and signed cooperation agreements with related organizations in enhancing climate resilience and energy transition on a global scale. ([The Korea Herald](#), June 27)

Domestic Activity & Climate Affairs

The Biden-Harris Administration's Recent Achievements in Climate Action and Clean Energy

Country/Region: The United States

The Short Story: The Biden-Harris Administration has implemented several key policies and initiatives intended for combating climate change and promoting clean energy in the past three months.

Why It Matters: These policies cover a broad range of topics—from bolstering offshore wind energy to enhancing public land management and investing in workforce development. These actions, once fully operating, will not only reduce carbon emissions and increase renewable energy output but also strengthen community resilience against—and open awareness of—climate change and ensure more equitable benefits across society.

The Full Feature Story: In 2024, the Biden-Harris Administration has taken bold steps in promoting clean energy. President Joe Biden marked the April 22 Earth Day celebration by unveiling a US\$7 billion initiative in federal grants for residential solar projects, targeting over 900,000 households in low- and middle-income communities in the U.S. This ambitious project is designed to reduce carbon emissions while also giving more lower income households access to renewable energy.

In addition to the Earth Day announcement, the administration surpassed a major milestone by approving over 10 gigawatts of clean energy from offshore wind projects; an amount that is sufficient to power nearly 4 million homes. Additionally, they have significantly advanced solar and wind energy development on public lands, with over 25 gigawatts of clean energy projects permitted, exceeding their 2025 goals ahead of schedule. The administration has also announced the full operational status of two major solar projects in California, which collectively add 465 megawatts of clean electricity to the grid, powering approximately 139,000 homes. In terms of carbon emission, The U.S. will establish a new

trade taskforce dedicated to cutting emissions from global commerce and manufacturing. It aims to provide carbon emissions data for US climate and trade policies and promote high standards for life cycle emissions.

In the realm of climate resilience, in late June the administration allocated more than US\$142 million to enhance the energy efficiency and climate resilience of housing supported by the U.S. Department of Housing and Urban Development. This funding aims to retrofit housing to withstand the increasing challenges posed by climate change. Moreover, a strategic plan has been finalized to guide the balanced management and conservation of public lands, focusing on improving land health and resilience in the face of a changing climate. This comprehensive approach enhances both the environmental and recreational value of public lands.

Furthermore, recognizing the need for a skilled workforce to support these initiatives, the administration has invested US\$60 million to build a 'climate-ready workforce.' This initiative is part of a broader effort to ensure that the benefits of a transitioning green economy are widely shared, particularly in low-income communities, where US\$20 billion has been earmarked to support clean energy investments. These efforts collectively plan to prepare communities and workers for the future, ensuring they are not only resilient but also active participants in the burgeoning clean energy economy.

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[Biden-Harris Administration Approves Eighth Offshore Wind Project](#), U.S. Department of the Interior, April 2, 2024
[Biden administration awards \\$20 bln for clean energy investment in low-income communities](#), Reuters, April 4, 2024
[Biden-Harris Administration Delivers Historic Milestones. New Actions for Clean Energy on Public Lands](#), U.S. Department of the Interior, April 11, 2024
[US creates climate and trade task force to address commerce, manufacturing emissions](#), Reuters, April 16, 2024
[Biden-Harris Administration finalizes strategy to guide balanced management, conservation of public lands](#), U.S. Bureau of Land Management, April 18, 2024
[Biden is marking Earth Day by announcing \\$7 billion in federal solar power grants](#), NBC News, April 22, 2024
[Biden administration sets landmark rules to clean up US power sector](#), Reuters, April 22, 2024
[Biden-Harris Administration invests \\$60 million to build a climate-ready workforce through Investing in America agenda](#), National Oceanic and Atmospheric Administration, June 11, 2024
[Biden-Harris Administration Announces More than \\$142 Million for Climate Resilience and Energy Efficiency Renovations in HUD-Supported Housing](#), U.S. Department of Housing and Urban Development, June 25, 2024

India's Climate Challenges in Prime Minister Modi's New Term

Country/Region: India

The Short Story: As Prime Minister Narendra Modi embarks on another term in office, India faces formidable climate challenges that will test its policies and domestic development strategies.

Why It Matters: India's vulnerability to climate change is not just an environmental issue but a profound socio-economic challenge that impacts food security, water availability, and the livelihoods of its vast

agricultural community. The country's economic and political future is increasingly intertwined with the outcomes of climate change, which has the power to negatively impact millions of Indian people in a variety of ways.

The Full Feature Story: India stands at a critical crossroad as it confronts escalating climate challenges in Prime Minister Narendra Modi's new term. The nation has experienced severe impacts from different extreme weather events caused by climate change recently, including erratic monsoons and extreme heat, disrupting and even endangering the lives of millions. As the third-largest emitter of greenhouse gases, India's approach to climate change is crucial to address not only for its own population but for global climate efforts.

Despite a strong voter base that recognizes the impacts of climate change, environmental issues often take a back seat in electoral politics in India. While 85% of Indians report feeling the effects of climate change, it remains a marginal issue compared to immediate economic and social issues during elections. This means that the Indian government often faces a dilemma in climate-related decision making: it cannot ignore climate change, yet it must place it at a relatively lower rank due to other pressing concerns.

Still, Prime Minister Modi has promised a new "green era," aiming to balance rapid industrialization with environmental sustainability. Over the years, his administration pledged to enhance clean energy infrastructure and achieve ambitious targets, such as installing 500 gigawatts of non-fossil energy by the end of the decade. However, the reliance on coal and the pressures of ensuring energy security for a growing economy complicate these goals. Modi's strategies must navigate the dual demands of economic growth and stringent climate action; a balancing act that simultaneously ensures economic growth and provides low-income populations with sufficient and accessible energy while also gradually reducing carbon emissions in a notable way.

India's energy sector is widely scrutinized as it directly impacts the course of climate change from emissions, while agriculture is emphasized due to its vulnerability from the effects of climate change. India's agricultural sector—vital for the country's economy and the sustenance of its population—has been wrought by changes in monsoon patterns leading to either droughts or floods, both of which have devastating effects on crop yields and farmer livelihoods. As of early summer, India is already experiencing the adverse effects of prolonged high temperatures, and scientists fear the high likelihood that severe convective weather will soon begin to impact the region in succession. Innovative approaches and improved infrastructure could be important to mitigate these impacts and secure India's food supply, but more immediate actions need to be taken by the Modi government. For instance, the heatwaves pose higher demands on India's food storage and transportation capabilities. Due to the lack of advanced food preservation technology and poor supply chain, a significant amount of food rots during transit, leading to substantial losses and waste of much-needed foodstuffs. This is just one example of how climate issues affect agriculture. In the future, more such problems are likely to emerge, continually testing the

Modi government's ability to respond to climate change challenges.

Sources:

[Climate change hardly a burning issue for Indian voters](#), *Eco-Business*, May 13, 2024

[85% Indians say climate change affecting them: Survey](#), *The Hindu*, May 17, 2024

[Climate change impacts millions in India. But as the country votes, some politicians skirt the issue](#), *AP News*, May 19, 2024

[Rotten Bananas in a Scorching India Expose Climate's Food Cost](#), *Bloomberg*, May 23, 2024

[Modi Will Feel the Heat in a Third Term. And Not Just Politically.](#), *The New York Times*, June 4, 2024

[India's Climate Dilemma Will Hang Over Modi's Next Five Years](#), *Bloomberg*, June 8, 2024

[Climate change makes India's monsoons erratic. Can farmers still find a way to prosper?](#), *AP News*, June 21, 2024

More on Domestic Activity & Climate Affairs:

- **Morocco:** A new collection of satellite images from 2018 to 2024 depict a “rapid change” in Morocco’s second-largest reservoir, with figures saying the Al Massira Dam contains just 3% of the average amount of water present nine years ago. ([GhanaWeb](#), April 10)
- **Germany:** German research minister Bettina Stark-Watzinger is pushing for a new law to regulate nuclear fusion energy generation at the time when power plants based on nuclear fusion are viewed as “future technology for CO²-neutral energy production.” ([Die Zeit](#), April 22)
- **The United States:** Florida’s Governor Ron DeSantis signed legislation deprioritizing climate change in the energy industry. The new legislation, effective July 1, includes bans on offshore wind turbines, promotes natural gas expansion, deregulates gas pipelines, and protects gas appliances. Experts criticize this approach, especially as Florida continues to face significant climate challenges. ([The Guardian](#), May 16)
- **China:** China is moving to establish a national standard for corporate sustainability reporting by 2030 to enhance economic sustainability and align with global environmental, social, and governance (ESG) norms. The Ministry of Finance is currently soliciting public feedback on draft guidelines of the standard. ([South China Morning Post](#), May 29)
- **Brazil:** In Manaus, the Inter-American Court of Human Rights concluded its final public hearing in a historic climate litigation case involving hundreds of testimonies and statements on climate emergency and human rights. Several other international bodies are also preparing for first-time advisory opinions on what countries must do to combat climate change. ([CEJIL](#), May 30)
- **Singapore:** Singapore is set to construct two more hydrogen-ready natural gas power plants by 2030 to address its rising electricity demand and exemplify its commitment to transitioning to greener energy sources while maintaining reliance on transitional fuels like natural gas. ([The Strait Times](#), June 5)
- **Panama:** Around 300 Indigenous families from Gardi Sugdub, Panama, have permanently relocated due to rising sea levels. They moved to a newly built housing development, Nuevo Cartí, which accommodates 1,350 individuals and is. This relocation is part of a broader trend expected to affect many coastal communities in Panama. ([NBC News](#), June 8)

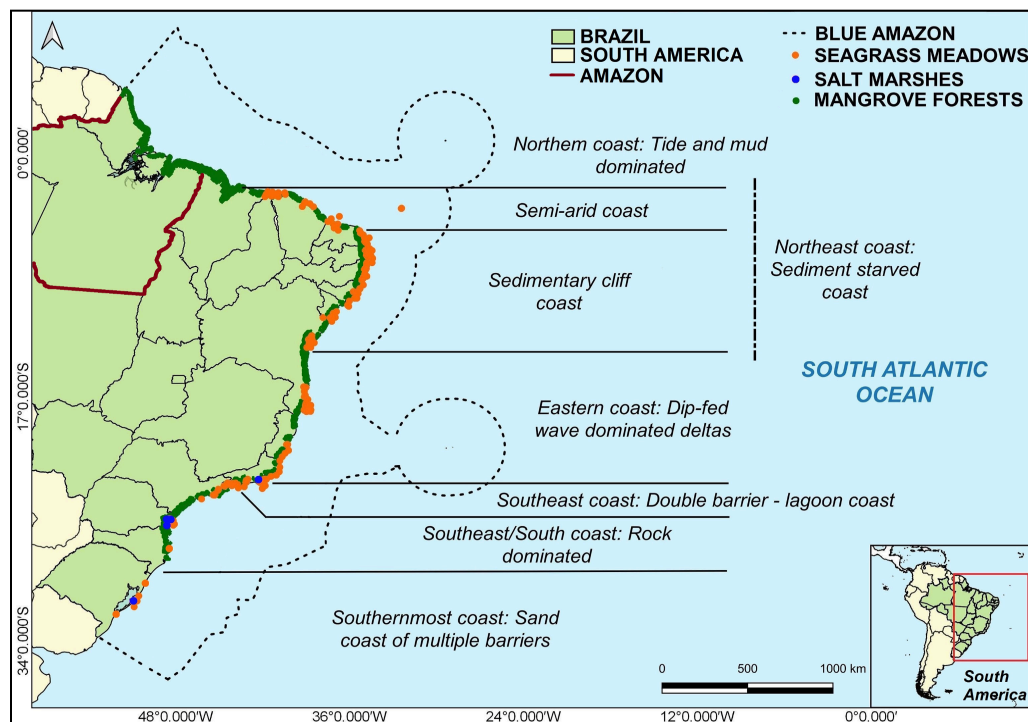
- **Canada:** The CEOs of Canada's big five banks reemphasized their commitment to fighting climate change to the parliament, but they also noted that it would take time to reach net zero emissions. ([CBC](#), June 13)
- **The United States:** Record-breaking temperatures are impacting a wide breadth of U.S. cities from central to northeastern states, with New York and Chicago experiencing historically high heat levels, prompting emergency responses and warnings of potentially deadly conditions. ([Reuters](#), June 18)
- **Kenya:** After three years of drought in the Samburu region of Kenya, herders are increasingly turning from cows to camels for milk production, who have a natural resistance to hot climates. ([Le Monde](#), June 16)
- **Colombia:** In early April, Bogotá, Colombia implemented water rationing for its 9 million residents due to critically low reservoir levels exacerbated by drought and the El Niño phenomenon, organizing zones where water supply would be cut off for 24 hours on a rotating 10-day cycle. Nearly three months later, a revised, less stringent schedule was announced to begin in July as reservoirs began to show signs of recovery. ([The City Paper Bogota](#), June 27)
- **Saudi Arabia:** According to Saudi Arabia, at least 1,301 people died during this year's Hajj pilgrimage due to walking long distances under extreme heat with temperature exceeding 50°C (122°F). ([BBC](#), June 28)
- **Japan:** Japan's government is pushing to pass legislative amendments that could significantly boost Japan's wind industry. Currently, Japan relies heavily on fossil fuels, with renewables counting for just 24% of the energy production. ([The Japan Times](#), June 30)

Blue Carbon Country Profile: Brazil

A. Potential of Brazil in Blue Carbon Affairs

Given its size and close proximity to the equator, Brazil has exceptionally high biodiversity and is recognized by the United Nations Environment Programme as a “mega-diverse country.” A vast array of diverse species can be found along its extensive coastline alone, which stretches over 9,000 kilometers. The key blue carbon ecosystems—such as mangroves, salt marshes, and seagrass meadows—all exist in large amounts. Brazil’s mangrove reserve is particularly abundant, with nearly 10% of the world’s existing mangroves being located in Brazil. These ecosystems play a crucial role in helping Brazil achieve its goals of reducing net carbon emissions and mitigating climate change. They also have a positive impact on protecting biodiversity and creating economic benefits. For instance, the mangroves near Brazil’s coast provide habitats for a wide range of species, from microorganisms to large fish and mammals. Additionally, these blue carbon resources are vital for the economic livelihood of coastal fishing communities, fostering a positive feedback loop that integrates even human society within the ecosystem.

- Amount of mangroves: 14,000 km² (2024)
- Amount of seagrass: 678 km² (2023)
- Amount of salt and tidal marshes: about 2,000-3,000 km² (due to differences in calculation methodologies)
- Key institutions of study on blue carbon: Brazilian Blue Initiative; Chico Mendes Institute for Biodiversity Conservation
- Key regions of interest: Extractive Reserve Arapiranga Tromai; Extractive Reserve Baía do Tubarão⁴



⁴ Image source: Soares MO, et al. (2022) Blue Carbon Ecosystems in Brazil: Overview and an Urgent Call for Conservation and Restoration. *Front. Mar. Sci.* 9:797411. doi: 10.3389/fmars.2022.797411

Nevertheless, Brazil's blue carbon ecosystems face multiple threats from both human activities and natural processes. Human-induced threats include decades of deforestation and changes in land use, where mangroves and other coastal areas are sometimes cleared for industrial level agriculture, urban development, and aquaculture, inevitably causing habitat loss and environmental degradation. Additionally, pollution from industrial and agricultural runoff results in water contamination, adversely affecting the health and functionality of these ecosystems. Overfishing also poses a quiet but significant threat, reducing biodiversity and disrupting the balance of marine life. Natural threats primarily stem from climate change, with rising sea levels and increased storm intensity threatening the stability and integrity of these coastal systems. Furthermore, natural disasters such as hurricanes and floods can cause severe damage to blue carbon ecosystems. As the frequency of these events increases due to climate change, their destructive impact has also become significantly more pronounced and compounded.

Fortunately, efforts to conserve and restore Brazil's blue carbon ecosystems are already being implemented; namely, legal frameworks, restoration projects, and future initiatives. Brazil's federal government has established several laws and designated protected areas to conserve its coastal ecosystems. These measures not only include positive incentives for restoring blue carbon resources and biodiversity but also include strict regulatory penalties for damaging blue carbon ecosystems. Looking forward, there is a pressing need for enhanced research to fully understand the carbon sequestration potential of Brazil's extensive blue carbon ecosystems and to address existing knowledge gaps. International collaboration through global partnerships focused on blue carbon conservation and restoration could be critical for Brazil's climate efforts.

B. Domestic Government Actions and Activities on Blue Carbon in Brazil

National Legislations

Until very recently, Brazil lacked national legislation that was entirely focused on the protection, restoration, and sustainable development of blue carbon ecosystems. However, this does not imply that Brazil has always undervalued its blue carbon resources. Perhaps it is due to Brazil's vast forests and diverse natural resources that it finds it challenging to dedicate extensive attention to blue carbon specifically over its other features, such as its world famous Amazon rainforest. More importantly, recent new regulations reflect the Brazilian government's heightened commitment to blue carbon conservation.

- **Federal Decree No. 11,075/2022** in Brazil establishes the **National System for Reduction of Greenhouse Gas Emissions (SINARE)** and defines procedures for creating Sectoral Plans for Climate Change Mitigation. SINARE operates as a single digital center for registering greenhouse gas emissions, removals, reductions and offsets, and for trading, transferring, transacting and retiring certified emission reduction credits. The decree includes blue carbon ecosystems in the registry of carbon stock units, thus recognizing their significant role in carbon storage and emissions reduction.
- Blue carbon ecosystems have been designated as **Permanent Preservation Areas (APPs)** under Brazilian environmental law in 2012. This designation restricts activities that could lead to

deforestation or degradation of these habitats. This legal framework serves a critical role as it not only maintains the ecological integrity and biodiversity of these areas but also ensures that their carbon sequestration functions are not undermined.

- On June 6, the Brazilian Federal Government launched the **National Program for the Conservation and Sustainable Use of Mangroves (programa nacional para conservação e uso sustentável de manguezais)**. This initiative aims to protect mangrove ecosystems, promote sustainable practices, and support the livelihoods of communities dependent on these areas. More specifically, the program focuses on preserving biodiversity, restoring degraded mangrove forests, and integrating local communities into conservation efforts.

National Agencies and Government Actions

Currently, there is no government agency specifically responsible for blue carbon in Brazil. The responsibility for blue carbon ecosystems management falls under the jurisdiction of the Ministry of the Environment and its subordinate agencies, depending on the specific aspect of conservation, management, or protection being conducted.

- **Ministry of the Environment (MMA):** The Ministry of the Environment is responsible for overseeing Brazil's environmental policies, including those specifically aimed at the protection and restoration of blue carbon ecosystems. The MMA coordinates national strategies and actions to integrate blue carbon initiatives into broader climate change mitigation plans. It also oversees other significant administrative and enforcement agencies.
 - **Chico Mendes Institute for Biodiversity Conservation (ICMBio):** The ICMBio works under the MMA, and it conducts restoration projects and scientific research that also encompass blue carbon ecosystems. For example, the "Manguezais do Brasil" project of the ICMBio focuses on the conservation and sustainable use of mangrove ecosystems.
 - **Brazilian Institute of Environment and Renewable Natural Resources (IBAMA):** Also under the MMA, IBAMA works as the environmental regulations enforcement body and protects blue carbon ecosystems. It conducts inspections, issues fines, and oversees compliance with environmental laws to prevent activities that would degrade natural habitats and ecosystems including blue carbon.
- **Brazilian Blue Initiative:** Launched by ICMBio and the MMA, the Brazilian Blue Initiative focuses on expanding marine protected areas (MPAs) and enhancing the conservation of coastal ecosystems. This initiative aims to protect and restore blue carbon ecosystems, and integrate conservation with sustainable economic activities and community involvement. The initiative also seeks to mitigate climate change impacts by enhancing the carbon sequestration capacities of these ecosystems.

Local Government Actions

Brazil's local governments are able to adopt more targeted blue carbon conservation measures based on local conditions, but their overall attitude and actions are consistent with those of their central government:

ensuring that blue carbon ecosystems are protected from any human-induced damage while simultaneously leveraging them for sustainable economic development.

- The **state of Pará** and the **state of Pernambuco** have made significant efforts to balance the protection and sustainable use of mangrove ecosystems. The states have established multiple mangrove protection areas, bringing almost all mangroves under federal government protection. These protected areas allow local residents to engage in traditional and sustainable extraction activities, such as fishing and hunting, while prohibiting large-scale commercial enterprises like aquaculture or logging. This ensures that the daily lives of local residents are supported without compromising the natural habitats of the mangroves.
- The **state of Pernambuco** has also implemented climate resilience and adaptation measures to restore degraded riparian forests, where many mangroves are located.
- The **state of Rio de Janeiro** hosted the first National Mangrove Congress (ConMangue) in the city of Niterói in July 2023 in commemoration of World Mangrove Conservation Day and as part of the Mangrove to the Sea Project (Projeto Do Mangue ao Mar). The government of Rio de Janeiro is working with academia, conservation organizations, NGOs, and fishermen to protect various blue carbon resources, including the mangroves in Guanabara Bay. They strive to find a balance between protecting the natural environment, supporting local communities' livelihoods, and even developing tourism.

C. Private, Commercial Third-Party Research & Projects

Private Corporations and Investment Groups

Based on a search and review of available sources, there currently do not appear to be specific private corporations or investment groups in Brazil that are prominently recognized for their direct involvement in blue carbon. This is partly because the protection of blue carbon, like other natural resources, has long been primarily managed by government agencies in Brazil. The private sector typically does not engage in blue carbon activities beyond carbon trading. Additionally, this is also likely because significant contributions from domestic and international research institutes and non-governmental organizations (NGOs) have sufficiently played a crucial role in blue carbon conservation efforts.

Universities and Research Institutes

There are some universities and research institutes in Brazil that are engaged in research and conservation efforts related to blue carbon ecosystems. Brazil's abundant blue carbon resources provide a unique advantage, enabling such institutions to conduct extensive primary research in various areas. At present, their research primarily focuses on enhancing the protection of mangrove and other blue carbon ecosystems' health and biodiversity, though they also delve into issues such as carbon sequestration calculations.

- The **BiomaBrasil Institute (IBB)** was established by members of the Bioma Laboratory – Center for Education and Information on Tropical Coastal Wetlands, with an emphasis on mangrove ecosystems,

at the Oceanographic Institute of the University of São Paulo (BIOMA/IOUSP). Over more than two decades, this laboratory has developed the scientific and technical capabilities needed to advance education, research, and extension activities focused on the conservation, rational use, and applied management of coastal-marine zones, particularly mangroves.

- The **Oceanography and Ecology Department of the Federal University of Espírito Santo (UFES)** is actively conducting blue carbon research. Its studies focus on the significant carbon sequestration potential of Brazil's mangroves. The research emphasizes the need for increased protection and inclusion of mangroves in Brazil's climate commitments. By investigating these critical ecosystems, UFES contributes valuable scientific insights that support national and international conservation and climate mitigation efforts.
- The **Federal University of Bahia (UFBA)** is also involved in blue carbon research, focusing on the role of mangroves and coastal vegetation in carbon sequestration. Their research supports efforts to quantify and preserve carbon stocks in mangroves, and enhances understanding on the ecological functions of mangroves. The UFBA also cooperates with foreign universities and institutes.

NGOs and Non-Profit Organizations

Brazilian NGOs play a complementary role to research institutions in blue carbon conservation efforts. Instead of conducting more conceptual theoretical research, NGOs are primarily dedicated to the practical implementation of blue carbon conservation actions. Furthermore, besides advancing the protection and restoration efforts, NGOs have maintained generally positive relationships with local residents and established collaborations in blue carbon protection related affairs.

- Conservation International (CI) has been a leading organization in blue carbon initiatives globally, with Brazil being one of their most important hubs. CI focuses on the protection and restoration of coastal wetlands, working with local communities to enhance biodiversity, improve livelihoods, and mitigate climate change. Their efforts in Brazil include projects that aim to conserve and restore mangrove forests in particular.
- Guardiões do Mar, or "Guardians of the Sea," is a Brazilian NGO that focuses on the conservation and restoration of coastal ecosystems. Active since 1998, they have successfully implemented projects like "Do Manguê ao Mar," planting 126,250 mangrove trees in the Guanabara Bay to restore biodiversity and sequester carbon. They engage local communities in conservation efforts, providing employment and fostering sustainable practices. Their projects also include environmental education, waste management, and promoting the socio-economic development of traditional communities.

D. Public, Governmental International Engagements on Blue Carbon

Treaties & Agreements

- Brazil is a contracting party of the Ramsar Convention on Wetlands, an intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources, which includes mangroves and other blue carbon ecosystems. Brazil is designating suitable wetlands for inclusion in the Ramsar List of Wetlands of International Importance and ensuring their effective

management.

- Brazil is also a party to the Convention on Biological Diversity (CBD), a convention that aims to conserve biological diversity, promote sustainable use of its components, and ensure fair and equitable sharing of benefits arising from genetic resources. CBD is actively encouraging the participating countries to incorporate blue carbon ecosystems into integrated coastal management, climate response, biodiversity conservation and blue economy planning.

Statements at International Conferences

- As a side event of COP13 in 2007 titled the International Discussions on Mangrove and Coral Protection, Brazil highlighted their advancements in mangrove protection. Their highlights included the designation of two wetlands, the commitment to launching the National Strategy for the Conservation and Sustainable Use of Wetlands, and the achievements of the GEF/Mangroves project, which included the complete mapping of all Brazilian mangroves and the production of the Atlas of Brazilian Mangroves.

Cross-Border Joint Projects & Partnerships

Based on existing information, Brazil is not involved in major cross-border blue carbon joint partnerships yet. This can be attributed to several factors. First, partnerships between Brazil and more developed countries are not essential for Brazil as it possesses sufficient research capabilities and a comprehensive legal framework for blue carbon protection. Second, Brazil has a substantial blue carbon reserve to focus on domestically, making it prioritizing its internal conservation and management efforts over helping other nations. Also, Brazil is not an isolated country in blue carbon protection efforts since it is already actively engaged in several multinational environmental initiatives focused on natural conservation in general.

E. Keeping An Eye On...

Brazil has many unique advantages for the domestic development of blue carbon. As a country rich in biodiversity and a variety of inland and coastal ecosystems, Brazil not only has a substantial reserve of blue carbon ecosystems but also places great importance on blue carbon, just as it does on all its other ecosystems. This is evident from the high priority given to ecosystem protection by institutions at all levels of government and society in Brazil. Within this framework, government departments are responsible for overall strategic planning, research institutions conduct scientific research and provide theoretical guidance, and non-governmental organizations, sometimes in collaboration with local or federal departments, handle the concrete implementation of conservation efforts. This fluid, multi-level cooperation enables Brazil to make impressive achievements in blue carbon protection and sustainable utilization.

Looking ahead, Brazil has both the capability and the need to advance further in blue carbon development. While the protection of blue carbon ecosystems receives attention similar to that of other ecosystems,

there is a lack of dedicated focus on blue carbon. This is especially true at various government levels, where there is no particular emphasis on blue carbon, despite its significantly higher carbon sequestration efficiency compared to other natural resources. The absence of specific attention, while in some ways understandable, is unfortunate. In this case, Brazil's efforts regarding blue carbon are still primarily centered on its value as a natural ecosystem and its importance for biodiversity. The potential of blue carbon as a significant carbon sink source does not appear to have been fully realized by Brazil. Carbon sequestration represents one of the most important economic values of blue carbon. Enhancing the development of blue carbon's value as a carbon sink could also attract more investment from private enterprises, bringing additional funds to blue carbon conservation—an area where Brazil currently faces significant shortfalls—and the country at large. Brazil also lacks the development of the commercial value of blue carbon ecosystems; an absence that is likely partly due to the scarcity of related private enterprises. Brazil's sustainable use of blue carbon remains at the most basic level of artisanal fishing. The economic values of blue carbon tourism and the development of eco-friendly aquaculture have not yet been fully used.

Finally, Brazil needs to consider strengthening its cooperation with other countries. The current ratio of Brazil's blue carbon ecosystems to the resources dedicated to their protection is disproportionate. Despite the broad participation of government agencies, academia, and non-governmental organizations in blue carbon conservation, this effort is still insufficient given Brazil's vast blue carbon reserves. Collaborating with other countries and involving more personnel and technology in Brazil's blue carbon conservation efforts would inevitably help advance the progress of not only Brazil's blue carbon protection initiatives but those of other nations in a mutually beneficial way.

Main Sources & Expanded Reading

[Blue Carbon Ecosystems in Brazil: Overview and an Urgent Call for Conservation and Restoration](#), Frontier, April 28, 2022

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[Brazilian Mangroves: Blue Carbon Hotspots of National and Global Relevance to Natural Climate Solutions](#), Frontier, January 2, 2022

[Brazilian mangroves](#), ScienceDirect, December 26, 2000

[Pricing Carbon in Brazil](#), Yale Center for Business and the Environment, November 17, 2017

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[Brazil: Federal Decree sets up national system for reduction of greenhouse gas emissions and sectoral plans for climate change mitigation](#), Global Compliance News, July 28, 2022

[Congresso Nacional de Manguezais, que acontece em Niterói neste mês, recebe certificação de neutralização de carbono](#), City of Niterói, July 13, 2023

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[CSF delivers course to help conserve Brazil's Mangroves](#), conservation strategy, August 1, 2016
[Brazil boosts protection of Amazon mangroves with new reserves in Pará state](#), Mongabay, April 19, 2024
[About Us](#), Brazilian Blue Initiative, last visited on June 30, 2024
[Practical Actions for Advancing Blue Carbon Initiatives](#), Pemsea, February 2018
[Estudo de professor da Ufes revela benefícios dos manguezais para comunidades costeiras](#), Universidade Federal do Espírito Santo, February 20, 2024
[Manguezais e vegetações da costa latino-americana respondem por até 13% do "carbono azul" do planeta, aponta estudo](#), Universidade Federal Da Bahia, November 13, 2023
[CI-BRASIL E MMA REALIZAM OFICINA COM FOCO NA CONSERVAÇÃO E RESTAURAÇÃO DE MANGUEZAIS](#), Conservation International, January 30, 2024
[Especialistas em manguezais alertam dos riscos sem preservação do mar](#), agência Brasil, July 17, 2023
[Países debatem resultados na proteção de mangues e corais](#), Instituto Chico Mendes de Conservação da Biodiversidade, October 30, 2018

This season's Blue Carbon Country Profile on Brazil was primarily researched and written by Zhangchen Wang, Part-Time Research Assistant at the Institute for China-America Studies.

Note: This study was conducted in English and Portuguese. The research in Portuguese was completed with the assistance of a translator, which may introduce some inaccuracies.

Scientific Research and Beyond

Scientific Research Results & Releases

April 2024

- Research Article: [The African Regional Greenhouse Gases Budget \(2010–2019\)](#), *Global Biogeochemical Cycles*, Vol. 38, No. 4
- Journal Article: [Human activities altered the enrichment patterns of microplastics in mangrove blue carbon ecosystem in the semi-enclosed Zhanjiang Bay, China](#), *Frontiers in Marine Science*, Vol. 11
- Journal Article: [Typology analysis and adaptive capacity of commercial gardening farmers to climate change in peri-urban areas along the coastal area of Benin \(West Africa\)](#), *Frontiers in Sustainable Food Systems*, Vol. 8
- Research Article: [Antarctic meteorites threatened by climate warming](#), *nature climate change*, 14
- Journal Article: [Frugivores enhance potential carbon recovery in fragmented landscapes](#), *nature climate change*, 14
- Review Article: [Global Lake Health in the Anthropocene: Societal Implications and Treatment Strategies](#), *Earth's Future*, 12
- Journal Article: [Generative AI tools can enhance climate literacy but must be checked for biases and inaccuracies](#), *nature communications earth & environment*, Vol. 5, No. 226

May 2024

- Journal Article: [Ocean protection quality is lagging behind quantity: Applying a scientific framework to assess real marine protected area progress against the 30 by 30 target](#), *Society for Conservation Biology*, Vol. 17, No. 3
- Research Article: [Indian Ocean temperature anomalies predict long-term global dengue trends](#), *Science*, Vol. 384, No. 6696
- Journal Article: [Control of *Vibrio vulnificus* proliferation in the Baltic Sea through eutrophication and algal bloom management](#), *nature communications earth & environment*, Vol. 5, No. 246
- Journal Article: [Large-scale green grabbing for wind and solar photovoltaic development in Brazil](#), *nature sustainability*, Vol. 7
- Journal Article: [Comparing public and scientific extreme event attribution to climate change](#), *Climate Change*, Vol. 177, No. 76
- Brief Communication: [Cross-border CO₂ transport decreases public acceptance of carbon capture and storage](#), *nature climate change*, 2024
- Journal Article: [Carbon export from seaweed forests to deep ocean sinks](#), *nature geoscience*, Vol. 17
- Journal Article: [Declining groundwater storage expected to amplify mountain streamflow reductions in a warmer world](#), *nature water*, Vol. 2
- Report: [UNESCO State of the Ocean Report 2024](#), UNESCO, May 30
- Journal Comment: [Climate change, health, and human rights: calling on states to address the health risks of climate change, through the Inter-American Court of Human Rights](#), *The Lancet*, Vol. 34

June 2024

- Journal Article: [Global groundwater warming due to climate change](#), *nature geoscience*, Vol. 17
- Research Article: [Consistent time allocation fraction to vegetation green-up versus senescence across northern ecosystems despite recent climate change](#), *Science Advance*, Vol. 10, No. 23
- Journal Article: [Global impacts of marine heatwaves on coastal foundation species](#), *nature communications*

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- Research Article: [Arctic summer sea ice loss will accelerate in coming decades](#), *Environmental Research Letter*, Vol. 19, No. 7
- Journal Article: [Extreme Antarctic Cold of Late Winter 2023](#), *Advanced in Atmospheric Sciences*, 2024
- Journal Article: [Alternative dimethylsulfoniopropionate biosynthesis enzymes in diverse and abundant microorganisms](#), *Nature Microbiology*, 2024
- Report: [Extreme heat killing more than 100 people in Mexico hotter and much more likely due to climate change](#), Imperial College London, June 20
- Brief Communication: [Increasing frequency and intensity of the most extreme wildfires on Earth](#), *nature ecology & evolution*, 2024
- Research Article: [Cumulative risk of future bleaching for the world's coral reefs](#), *Science Advance*, Vol. 10, No. 26

Major Government Statements & Actions

Key Government Speeches on Climate Issues

- April 5, U.S. Department of State: [“Secretary Antony J. Blinken and European Commission Executive Vice-President and EU Trade Commissioner Valdis Dombrovskis at Minerals Security Partnership Forum Launch”](#)
- April 9, Government of Brazil: [“Speech by President Lula during the launch of the Union with Municipalities for the Reduction of Deforestation and Forest Fires program” \[In Portuguese\]](#)
- April 16, The White House: [“Remarks as Prepared for John Podesta Columbia Global Energy Summit”](#)
- April 23, U.S. Department of Commerce: [“Remarks by Deputy Secretary of Commerce Don Graves at the NOAA Heat Risk Tool Press Event”](#)
- April 23, U.S. Agency for International Development: [“Feed the Future Deputy Coordinator for Development Dina Esposito at the Innovations in Climate Resilience Conference”](#)
- April 25, Government of Germany: [“Speech by Foreign Minister Annalena Baerbock at the opening of the 15th Petersberg Climate Dialogue”](#)
- May 4, Government of Japan: [“Speech by Prime Minister KISHIDA Fumio on Japan’s Foreign Policy towards Latin America and the Caribbean ‘Paving a Pathway to ‘Human Dignity’ with Latin America and the Caribbean”](#)
- May 28, U.S. Department of the Treasury: [“Remarks by Secretary of the Treasury Janet L. Yellen on High-Integrity Voluntary Carbon Markets”](#)
- May 29, U.S. Embassy & Consulates in China: [“Ambassador Burns’ Pre-Recorded Remarks to U.S.-China Subnational Climate Action Forum”](#)
- May 29, Embassy of the People’s Republic of China in the U.S.: [“Ambassador Xie Feng: Ultimately, the vision of China-U.S. climate cooperation needs to be translated into real action at the subnational level”](#)
- June 2, World Cities Summit: [“Opening Address by Minister for National Development and Minister-in-Charge of Social Services Integration Desmond Lee at World Cities Summit 2024 Mayors Forum on 02 June 2024”](#)
- June 5, United Nations: [“Secretary-General’s special address on climate action ‘A Moment of Truth’”](#)
- June 10, United Nations: [“Two Years to Save the World: Simon Stiell at Chatham House”](#)
- June 10, Government of the United Kingdom: [“The UK recognises that climate change impacts on peace and stability across Central Africa: UK statement at the UN Security Council”](#)
- June 13, United Nations: [“Simon Stiell Closing Speech: Don’t Leave the Hardest Work to the Eleventh](#)

[Hour”](#)

- June 26, Government of Scotland: [“Tackling the climate emergency: speech by the Minister for Climate Action”](#)

Government Reports & Regulations on Climate Issues

- On April 3, the U.S. Department of Agriculture [made](#) US\$1.5 billion available to help farmers advance conservation and climate-smart agriculture as part of president Biden’s investing in America agenda.
- On April 4, Biden-Harris administration [announced](#) historic US\$20 billion in awards to expand access to clean energy and climate solutions and lower energy costs for communities across the nation.
- On April 9, the Grand Chamber of the European Court of Human Rights [announced](#) rulings for three separate cases, all stating that relevant States have a positive obligation to adopt “measures for the substantial and progressive reduction of their respective GHG [Greenhouse Gas] emission levels.”
- On April 10, the Government of Brazil [launched](#) the Union with Municipalities for Reducing Deforestation and Forest Fires in the Amazon program, which includes a BRL730 million investment across 70 municipalities.
- On April 10, Malaysia’s National Energy Council and Prime Minister agreed to [fast-track](#) the implementation of carbon-related legislation, expediting the introduction of a law on not only renewable energy but also carbon trading, carbon credits and carbon capture, utilization and storage.
- On April 15, the U.S. National Oceanic and Atmospheric Administration [confirmed](#) the 4th global coral bleaching event on record and the second in the last decade.
- On April 16, the Philippines’ Climate Change Commission [signed](#) a memorandum of understanding with Ayala Group in recognition of the “vital role of the private sector in attaining the country’s climate adaptation and mitigation plans.”
- On April 17, the U.S. Department of State [announced](#) US\$508 million to protect oceans by advancing marine protected areas, maritime security, and the sustainability of the blue economy.
- On April 25, the Biden-Harris administration [finalized](#) the set of standards to reduce pollution from fossil fuel-fired power plants to significantly reduce climate, air, water, and land pollution from the power sector.
- On April 25, the Parliament of the Republic of South Africa [passed](#) the Climate Change Bill [B9B-2022], a critical piece of legislation that seeks to enable the development of an effective climate change response and a long-term just transition to a low-carbon and climate-resilient economy and society for South Africa.
- On April 25, the U.S. Department of Energy (DOE) [amended](#) their list of categories of projects which, because they typically do not have significant environmental impacts, qualify for the simplest form of environmental review under the National Environmental Policy Act (NEPA).
- On April 29, the Indonesian Ministry of Health, the United Nations Development Programme in Indonesia, and the World Health Organization [signed](#) a joint commitment to implement a project funded by the Green Climate Fund, an ambitious global climate and health investment initiative.
- On April 30, the U.S. Department of Commerce [published](#) the *Carbon Capture, Utilization, and Storage Handbook for Policymakers*, to “empower legislators, ministries, regulators, and state-owned companies to adopt and enforce legal instruments that will rapidly and effectively deploy carbon capture, utilization, and storage capabilities.”
- On May 2, U.S. President Biden [expanded](#) San Gabriel Mountains National Monument and Berryessa Snow Mountain National Monument, protecting nearly 120,000 more acres of lands in California of

scientific, cultural, ecological, and historical importance.

- On May 6, the U.S. Environmental Protection Agency [announced](#) the final rule to cut methane emissions and strengthen and update greenhouse gas emissions reporting for the oil and gas sector.
- On May 15, after Malawi, Zambia and Zimbabwe declared national emergencies related to the El Niño phenomenon, the World Food Programme [released](#) a report calling for urgent funds to offset droughts and hunger from failed harvests.
- On May 15, also China's National Low-Carbon Day, China's Ministry of Ecology and Environment officially [released](#) the "China Climate Change Adaptation Progress Report (2023)."
- On May 17, the Bundesrat of Germany [approved](#) the Climate Protection Act (Klimaschutzgesetz), coming into force as an essential national climate policy targeting greenhouse gas neutral by 2045.
- On May 22, Philippine President Ferdinand Marcos Jr. [signed](#) into law the Philippine Ecosystem and Natural Capital Accounting System (PENCAS) Act (Republic Act No. 11995), which aims to further protect, support and institutionalize an accounting of the nation's natural resources.
- On May 24, the Chinese Ministry of Ecology and Environment [released](#) its "2023 Report on the State of Ecology and Environment of China."
- On May 27, the Republic of Maldives and Government of Antigua and Barbuda, in partnership with the International Institute for Environment and Development, [released](#) the "Global Small Island Developing States (SIDS) Debt Sustainability Support Service" document that pushes for debt relief and more climate investment ahead of this year's COP29 climate summit, part of a 10-year strategy to help save some island states from near extinction.
- On May 28, the U.S. government [released](#) a Joint Policy Statement and Principles on Voluntary Carbon Markets, in efforts to help potentially channel private capital to drive decarbonization efforts.
- On June 4, Singapore's Energy Market Authority [opened](#) up its second bid for proposals by the private sector to build, own and operate two new power plants by 2029 and 2030 to meet electricity demands.
- On June 4, China's Ministry of Natural Resources [released](#) a notice directed to several domestic provinces, cities and agencies on strengthening the protection and restoration of coral reefs.
- On June 4, the Philippines' Department of Environment and Natural Resources [launched](#) a citizen science program that depends on public participation to address the decline of the country's mangrove forests in a bid to protect and manage the national vital mangrove cover.
- On June 5, the Inter-American Commission on Human Rights officially [celebrated](#) the historic hearings process conducted by the Inter-American Court of Human Rights for an Advisory Opinion on "Climate Emergency and Human Rights," requested by Chile and Colombia, which involved 265 written submissions and more than 150 oral interventions across seven days.
- On June 19, President Lai Ching-Te of Taiwan [established](#) the National Climate Change Response Committee to "promote climate governance from a national perspective and further transnational cooperation."
- On June 27, Prime Minister of the Republic of Korea Han Duck-so [announced](#) 6.7972 trillion won for a continuous expansion on the Official Development Assistance (ODA) project, at a meeting with the International Development Cooperation Committee at the Government Complex in Seoul, supporting the government role in climate crisis response.

Cross-National Meetings & Engagements on Climate Issues

- On April 2, U.S. Special Representative McAuliffe [traveled](#) to Colombia and Costa Rica for the launch of three climate entrepreneurship hubs, aiming to engage 1,000 relevant actors, involve 450 students in

- presenting green ideas, train 100 startup teams, and mentor 40-60 educators in the field.
- On April 5, U.S. Secretary Blinken and the European Commission officially [launched](#) the Minerals Security Partnership Forum in Leuven, Belgium, to give minerals producing countries a place to commit to “advancing and accelerating individual projects with high environmental, social, and governance (ESG) standards.”
 - On April 12, the World Wildlife Fund and the Blue Carbon Research Centre [launched](#) a partnership to safeguard coastal ecosystems, working with countries and regions where vital blue carbon ecosystems—including mangroves, seagrasses, and saltmarshes—are at risk, helping to scale action that will combat climate change and its impacts.
 - On April 16, the Hungarian Embassy and the Philippines’ Climate Change Commission [strengthened](#) partnership for enhanced climate adaptation in the water sector, in support of enhancing the Philippines’ climate resilience.
 - On April 19, the United States and Singapore [convened](#) a meeting to review the implementation of the Free Trade Agreement Environment Chapter and Memorandum of Intent on Cooperation in Environmental Matters.
 - From April 23 -29, Canada [welcomed](#) delegations, high-level representatives, partners, and stakeholders from around the world to Ottawa for the fourth session of the Intergovernmental Negotiating Committee on Plastic Pollution (INC-4).
 - On April 30, the fourth meeting of the U.S.-UK Strategic Energy Dialogue 2024 was [held](#) to continue to “enhance and expand cooperation across shared energy security and resilience, clean energy, and net zero objectives.” Both parties reaffirmed commitments to reach Net Zero by 2050, including efforts to decarbonize oil and gas production and to transition away from fossil fuels.
 - On May 3, [Japan](#) and [Brazil](#) launched the Brazil-Japan Partnership Initiative on Environment, Climate, Sustainable Development and Resilient Economies “recognizing the importance of addressing energy security, climate change and the environment” in alignment with sustainable development.
 - On May 8, ECOWAS Global [held](#) its annual meeting in The Gambia for its project “Global transformation of forests for populations and the climate: A focus on West Africa.”
 - From May 8-9, the United States [hosted](#) a meeting of the U.S.-China Working Group on Enhancing Climate Action in the 2020s in Washington, D.C., co-led by Senior Advisor to the President for International Climate Policy John Podesta and PRC Special Envoy for Climate Change Liu Zhenmin.
 - On May 22, the third High-Level Meeting of the U.S.-France Bilateral Clean Energy Partnership was [held](#) in Paris, France, co-chaired by the U.S. Department of Energy, U.S. Department of State, French Ministry of the Economy, Finance and Industrial and Digital Sovereignty, and French Ministry for Europe and Foreign Affairs. This partnership aims to address “energy policy, technology, and innovation that advances a suite of zero-emissions energy sources and systems, and to enhance diplomatic efforts that support accelerating energy transitions and achieving climate objectives.”
 - On May 27, the African Development Fund [launched](#) the second call for proposals through its Climate Action Window (CAW) on the sidelines of the 59th Annual Meetings of the Board of Governors of the African Development Bank Group in Nairobi, supporting 37 low-income and vulnerable African countries in “accelerating and scaling up access to climate finance for actions addressing the impacts and shocks of climate change.
 - On May 28, the U.S. Department of State, Emerging Business Factory, and the Near East Foundation [co-hosted](#) a Climate Start-Up Showcase on the sidelines of GITEX Africa and under the banner of the Coalition for Climate Entrepreneurship.

- On June 3, representatives from the Japanese Ministry of the Environment and the Philippines' Climate Change Commission [met](#) to continue strengthening bilateral cooperation in climate change action “using best available science and data-based modalities.”
- From June 7-8, the Republic of Costa Rica [hosted](#) a High-Level Event on Ocean Action, attended by more than 1,500 delegates from over 40 countries.
- From June 13-15, Group of Seven (G7) ministers [held](#) their 50th summit in Apulia, Italy, during which they committed to “taking concrete steps to address the triple crisis of climate change, pollution, and biodiversity loss,” among other climate-related commitments.
- On June 17, representatives from the African Development Bank [met](#) with Japanese counterparts in Tokyo, Japan, to discuss support for climate action specifically as it relates to infrastructure systems.

Third-Party Analyses & Commentaries

In a year full of elections, climate issues now regularly hover on the edge of consideration and concern.

- [Protectionism, Competition, and Elections: Navigating a New Era of U.S. Climate Leadership](#) (Center for Strategic and International Studies, April 10)
- [Climate Tides in Politics: 2024 Asian Elections](#) (Asia Society Policy Institute, April 29)
- [Climate change in Italian politics: polarisation, demonisation and repression](#) (Heinrich Böll Stiftung, May 3)
- [South Africa 2024: What are parties promising on energy and climate?](#) (African Arguments, May 23)
- [Will EU election mess with the bloc's bold climate policies?](#) (DW, May 29)
- [For islanders, India election is about climate change and survival](#) (Reuters, May 30)
- [EU and Belgian elections: What's at stake for climate policy?](#) (The Brussels Times, June 7)
- [Mexico Elected a Climate Scientist. But Will She Be a Climate President?](#) (Inside Climate News, June 7)
- [Claudia Sheinbaum: What a climate-scientist turned president might mean for global efforts to tackle climate change](#) (BBC, June 7)
- [Green party losses in EU elections raise concerns over Green Deal](#) (The Guardian, June 9)
- [How climate change is shaping the UK election landscape](#) (E3G, June 19)
- [Climate change was a hidden force in India's elections. Now Modi needs to deliver solutions.](#) (Atlantic Council, June 26)
- [Biden vs. Trump on Climate Policy](#) (The New York Times, June 27)

Judicial bodies are increasingly weighing in on climate-related issues, to marked effects.

- [Reaction to Swiss women's victory in landmark climate court case](#) (Saltwire, April 9)
- [Exploring the Intersection of Human Rights and the Climate Crisis: Insights from new “Advisory Opinion on Climate Change” Report](#) (Columbia Climate School, April 19)
- [A Commentary on ITLOS' Advisory Opinion on Climate Change](#) (British Institute of International and Comparative Law, May 24)
- [Climate court cases that could set precedents around the world](#) (Reuters, May 29)
- [A Seminal Case for Climate Litigation](#) (Carnegie Endowment for International Peace, June 26)
- [Here's What the Court's Chevron Ruling Could Mean in Everyday Terms](#) (The New York Times, June 28)

Coral bleaching, ocean pollution, rising oceans, and unprecedented heat...all before summer even peaks.

- [China's Flag Is Red, Not Green](#) (The Wall Street Journal, April 7)
- [Imperilled by ocean acidification: Senegal's shellfish sector](#) (Dialogue Earth, April 18) [[In Chinese](#)]
- [Ocean Decade Conference offers pulse check with renewed focus on inclusion](#) (Economist Impact, April 23)

- [Where Seas are Rising at Alarming Speed](#) (*The Washington Post*, April 29)
- [Restoring China's vanishing oyster reefs](#) (Dialogue Earth, April 30) [[In Chinese](#)]
- [Slowing the chemical tide: safeguarding human and ocean health amid chemical pollution.](#) (Back to Blue Initiative, April 30)
- [The EU is not on track for a sustainable blue future](#) (World Wildlife Fund, May 7)
- [Hurricanes, heatwaves and rising seas: The impacts of record ocean heat](#) (BBC, May 9)
- [Climate disruption deserves more than a cameo role in security analysis](#) (Australian Strategic Policy Institute, May 16)
- [Investing in the Blue Economy to Save Fiji's Coral Reefs](#) (Joint Sustainable Development Goals Fund, May 20)
- [How does 2023-24 global coral bleaching compare to past events?](#) (National Oceanic and Atmospheric Administration, May 21)
- [Climate records keep getting shattered. Here is what you need to know](#) (AP, June 5)
- [Climate change adds to water woes in the Andaman Islands](#) (Dialogue Earth, June 14)
- [The "Venice of Africa" is sinking into the sea](#) (*The Economist*, June 24)
- [Reevaluating the future commercial viability of the Northern Sea Route](#) (*Arctic Business Journal*, June 27)

As COP29 approaches, analysts are trying to solve the problem of financing in addressing climate change.

- [The case for investing in nature-based solutions in 2024](#) (Project Seagrass, April 5)
- [Analysis: Forest communities fight for share of the shrinking carbon market](#) (Reuters, April 5)
- [Out of focus: Making progress on climate financing for Africa](#) (European Council on Foreign Relations, April 12)
- [Measuring climate-related financial risks using scenario analysis](#) (Bank of England, April 17)
- [Fight Climate Change With Fiscal Discipline](#) (*Bloomberg*, April 29)
- [Climate Priorities in the Middle East and North Africa](#) (Wilson Center, April 2024)
- [Developing the Blue Carbon Economy in Greece](#) (*Tovima*, May 3)
- [The Climate Change-Conflict-Displacement Nexus in the MENA Region](#) (Rice University's Baker Institute for Public Policy, May 21)
- [The Road to Baku, Belém, and Beyond: A 5-Year Outlook for U.S. International Climate Finance](#) (Center for American Progress, June 11)

People are noticing again that extreme heat does more than prevent plant growth and melt glaciers.

- [How Nigeria is reeling from extreme heat fuelled by climate change](#) (*Carbon Brief*, April 8)
- [Can Kazakhstan Meet Its Climate Goals?](#) (*New Security Beat*, April 29)
- [Climate change is fuelling turbulence and posing threats to South Asian aviation](#) (Dialogue Earth, May 23)
- [Alaskan rivers are turning orange. Climate change could be to blame.](#) (*The Washington Post*, May 24)
- [2023 set a record for U.S. heat deaths. Why 2024 could be even deadlier](#) (PBS, May 31)
- [The "Venice of Africa" is sinking into the sea](#) (*The Economist*, June 24)
- [Deaths During Annual Hajj in Saudi Arabia Underscore Extreme Heat Dangers](#) (Human Rights Watch, June 25)
- [Climate change is multiplying the probability of deadly heat waves in the US and Central America](#) (*El País*, June 29)

Multinational talks and regulations dedicated to climate seem to be multiplying, with moderate effect.

- [Environmentalism could stop the clean-energy transition](#) (*The Washington Post*, April 6)
- [Australian and UK defence commit to joint action on climate](#) (Australian Strategic Policy Institute, April 8)
- [One way to get China to clean up faster: build a 'climate club'](#) (*The Washington Post*, April 13)

- [Global plastic treaty talks are happening. What do stakeholders want?](#) (Reuters, April 22)
- [Data secrecy is stymying climate cooperation in South Asia](#) (Dialogue Earth, April 23)
- [Vietnam's Catch-22 in courting China as a rare earth partner](#) (South China Morning Post, May 15)
- [The EPA is trying to regulate 6 forever chemicals. Just 10,000 to go.](#) (The Washington Post, May 28)
- [Key takeaways from the Bonn climate conference](#) (The Guardian, June 21)
- [How a Climate Backlash Influenced Campaigning in Europe](#) (The New York Times, June 6)
- [It's time for Japan to set up a climate change agency](#) (The Japan Times, June 24)

People are wondering where fuel is, should be, and can continue to be coming from.

- [Driven by China. Coal Plants Made a Comeback in 2023](#) (The New York Times, April 10)
- [Mobilizing Against Thai Hydropower: Information in Power](#) (Foreign Policy Research Institute, April)
- [How the US can set standards on international deep-sea mineral mining](#) (South China Morning Post, May 1)
- [Leveraging Argentina's Mineral Resources for Economic Growth](#) (Center for Strategic and International Studies, May 14)
- [The US and China Are Up Against Nuclear and Climate Clocks](#) (Inkstick, June 3)
- [Green hydrogen: can China replicate its success in EVs, batteries and solar panels?](#) (South China Morning Post, June 15)
- [Xi's climate goals boost China's nuclear industry](#) (Financial Times, June 20)
- [How water could be the future of fuel](#) (The Washington Post, June 27)

Talk of fossil fuels and gas emissions are surging again, bringing in new problems, ideas, and accusations.

- [Biden, BP and the High-Stakes Sequel to Deepwater Horizon](#) (Bloomberg, May 3)
- [Biden and oil companies like this climate tech. Many Americans do not.](#) (The Washington Post, May 11)
- [Escalating emissions: How disruption from Houthi attacks in the Red Sea is challenges companies by driving up carbon emissions](#) (Reuters, May 28)
- [A greenhouse gas shipping levy is on the horizon](#) (Dialogue Earth, May 29)
- [Plug-in polluters? How Biden's emissions rules go soft on hybrid trucks, SUVs](#) (Reuters, June 6)
- [Methane Emissions: Can the United States and China Find Common Ground?](#) (New Security Beat, June 11)
- [Peak emissions in India and China: Promises, progress and prognosis](#) (Observer Research Foundation, June 18)
- [Japan looks to 'blue carbon' to cut emissions — and restore its coasts](#) (The Japan Times, June 23)

People watch as the U.S., China and the EU get caught in a fight over trade, to the detriment of the climate.

- [Cross-border synergy with China can help US more quickly adopt EVs](#) (South China Morning Post, April 23)
- [We need to talk about Chinese and US influence in Europe's energy industry](#) (The Conversation, May 7)
- [Don't Fret About Green Subsidies](#) (Project Syndicate, May 10)
- [Why Washington's new tariffs on Chinese clean tech goods matter](#) (Financial Times, May 14)
- [Why the World Has Gone Cuckoo for Copper](#) (The Wall Street Journal, May 14)
- [How China's EV overcapacity has come to a head after 15 years, and what's in store for the industrial policy race with US and EU](#) (South China Morning Post, May 14)
- [Biden is slapping tariffs on China. Will the climate suffer?](#) (E&E News, May 14)
- [Tariffs against China hamstringing the transition to a clean energy future](#) (The Washington Post, May 16)
- [America Is Losing the Green Tech Race to China](#) (The New York Times, May 22)
- [Is Biden Deferring the Green Transition to Contain China?](#) (Foreign Policy, May 28)
- [Trust and trade-offs: How to manage Europe's green technology dependence on China](#) (European Council on Foreign Relations, May 29)

- [The US and China Are Up Against Nuclear and Climate Clocks](#) (*Inkstick Media*, June 3)
- [Competition, Climate, and Resilience: Securing the EV Supply Chain in America](#) (*Wilson Center*, June 17)
- [Biden's Tough-on-China Stance Threatens Green America Push](#) (*The Wall Street Journal*, June 18)
- [Why world should fret over tariffs on Chinese EVs](#) (*China Daily*, June 24)

Now that the world finally understands what 'clean industries' mean, it can decide what to do with them.

- [China's EV battery sector has an Achilles' heel](#) (*Australian Strategic Policy Institute*, April 5)
- [A Software Billionaire Is Betting Big on a Wild Climate Fix](#) (*Bloomberg*, April 16)
- [Clean hydrogen's best bet may be a rainforest state in Borneo](#) (*The Japan Times*, April 20)
- [Can the world really engineer its way out of climate change?](#) (*The Washington Post*, May 1)
- [Corn, millet and ... rooftop solar? Farm family's newest crop shows China's solar ascendancy](#) (*AP*, May 20)
- [Managing Energy, Economic, and Environmental Transition: Workshop Report](#) (*Center for Strategic and International Studies*, May 21)
- [The Solar Breakthrough That Could Help the U.S. Compete With China](#) (*The Wall Street Journal*, May 30)
- [Digitalization and Decarbonization: How Data Are Evolving Clean Technology for Vessels](#) (*Sea Technology*, June 2024)
- [Green hydrogen: can China replicate its success in EVs, batteries and solar panels?](#) (*South China Morning Post*, June 15)
- [The exponential growth of solar power will change the world](#) (*The Economist*, June 20)
- [The Solar Flood](#) (*The Wire China*, June 23)

Rays of hope against the negative impacts of climate change are present, albeit still being outweighed.

- [How small-scale seaweed farmers can have a huge impact](#) (*The Fish Site*, April 1)
- [It's Time to Uncover the Mysteries of Blue Carbon](#) (*Environmental Defense Fund*, April 2)
- [The one-humped wonder: Ethiopia's camels in focus](#) (*Livestock Data for Decisions*, April 17)
- [Hearing the impact of climate change in Okinawa, one bird call at a time](#) (*The Japan Times*, April 21)
- [How Locals Saved 'the Yosemite of South America'](#) (*The New York Times*, May 2)
- [To Stop Climate Change, Use the Power of Price](#) (*Bloomberg*, May 7)
- [The Case for U.S.-China Cooperation on Climate-Smart Agriculture](#) (*Center for Strategic and International Studies*, May 7)
- [A Turning Point for Clean Cooking](#) (*Project Syndicate*, May 14)
- [The End of Greenwashing Is Now Within Sight](#) (*Bloomberg*, May 28)
- [The Right Kind of Tipping Point](#) (*The New York Times*, May 30)
- [How the Fight Against Climate Change Can Overcome Geopolitical Discord](#) (*Foreign Affairs*, June 18)
- [The Vanishing Islands That Failed to Vanish](#) (*The New York Times*, June 26)

Images of the Month

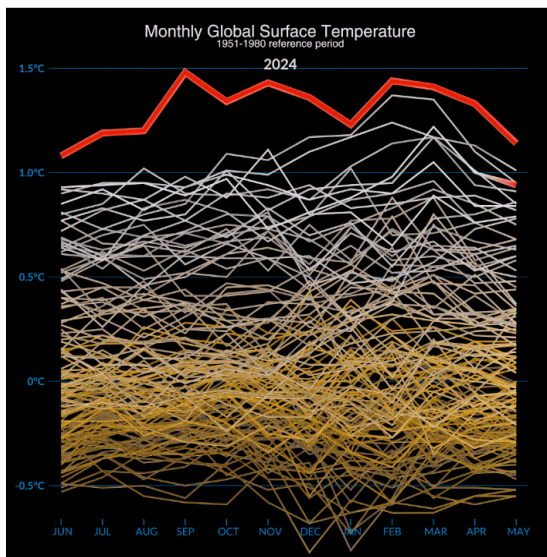


April 2024

U.S. President Joe Biden delivers remarks at an event for Earth Day, Monday, April 22, at Prince William Forest Park in Triangle, Virginia.

Behind the Image: President Biden announced the launch of the "Solar for All" initiative, which will provide US\$7 billion through the U.S. Environmental Protection Agency to help low and moderate-income families in the United State access residential solar power.

Source: [Official White House Photo by Adam Schultz](#)

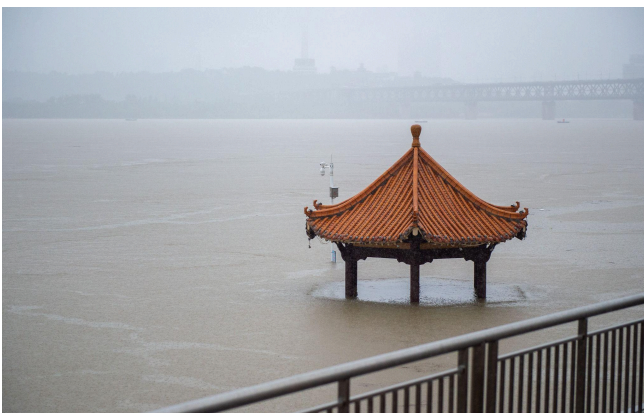


May 2024

According to the U.S. National Aeronautics and Space Administration, May 2024 was the warmest May on record, marking a full year of record-high monthly temperatures.

Behind the Image: Increased global temperatures—especially ones of this magnitude, breadth and continuity—can lead to more frequent and severe weather events like hurricanes and droughts, disrupt ecosystems and biodiversity, exacerbate food and water scarcity, as well as damage economic stability.

Source: [NASA's Scientific Visualization Studio](#)



June 2024

On June 29, a pavilion is seen submerged in floodwater in Wuhan, China after a heavy downpour of a red alert level.

Behind the Image: Extreme weather events have been frequent across China since spring. Recently, some southern provinces have recorded historically high precipitation levels, with some regions experiencing heavy rain of up to 280 mm within 24 hours. Scholars believe that the extreme weather and unusual local temperatures in China in recent months are at least partly induced by climate change.

Source: [Photo by Hu Jingwen/Xinhua via Getty Images](#)

Climate-Focused Quotes of the Quarter

“Warming today is hundreds of times faster than any warming in geological history...Anything that takes you from the climate you’re adapted to is a threat.”

- Michael Mann, Presidential Distinguished Professor in the Department of Earth and Environmental Science at the University of Pennsylvania, [speaking](#) at the Harvard Kennedy School’s Belfer Center for Science and International Affairs on April 3, 2024

“For those who say that climate change is only one of many priorities, like ending poverty, ending hunger, ending pandemics, or improving education, I simply say this: none of these crucial tasks—indeed none of the Sustainable Development Goals—will be possible unless we get the climate crisis under control.”

- Simon Stiell, UN Climate Change Executive Secretary, [speaking](#) at Chatham House in London, England on April 10, 2024

“We're going to take care of the Amazon as if it were the most important thing on planet Earth, because taking care of the Amazon means taking care of life...And there's no point in us standing around trying to take care of it, because it's the mayor who knows whose land is burning. It's the mayor who knows which farmer is deforesting. The mayor knows, he's there.”

- Luiz Inácio Lula da Silva, President of Brazil, [launching](#) the Union with Municipalities for Reducing Deforestation and Forest Fires in the Amazon program on April 9, 2024

“The new rules to clean up air pollution from power plants are good news for everyone, especially if there is a power plant near where you work, live or study. The American Lung Association applauds Administrator Regan and the entire team of professionals at the EPA for their resolute commitment to public health and environmental justice.”

- Harold Wimmer, President and CEO of the American Lung Association, [praising](#) the U.S. Environmental Protection Agency's (EPA) new rules for cleaning up air pollution from power plants, on April 25, 2024

“As we implement the historic climate programs under President Biden’s Inflation Reduction Act, EPA is applying the latest tools, cutting edge technology, and expertise to track and measure methane emissions from the oil and gas industry.”

- Michael S. Regan, Administrator of the U.S. Environmental Protection Agency, [commenting](#) on the climate-related acts of the Biden-Harris Administration, on May 6, 2024

“The two sides will deepen cooperation on climate change, biodiversity and other issues...China supports France in hosting the 2025 U.N. Ocean Conference, and welcomes partnerships between our national parks and nature reserves.”

- Xi Jinping, President of China, [speaking](#) at the joint meeting with the press with H.E. Emmanuel Macron, President of the French during his state visit to France on May 6, 2024

“I am very worried about the state of the world's coral reefs. We are seeing (ocean temperatures) play out right now that are very extreme in nature.”

- Derek Manzello, the U.S. National Oceanic and Atmospheric Administration's (NOAA) Coral Reef Watch Coordinator, [speaking](#) in a NOAA's monthly briefing on May 16, 2024

“High-integrity VCMs offer significant potential economic and climate opportunities. They can enable buyers to source cost-effective credits from different technologies, ecosystems, and geographies. And they can channel capital towards the most effective climate solutions.”

- Janet L. Yellen, U.S. Secretary of the Treasury, [remaking](#) on High-Integrity Voluntary Carbon Markets at an event on May 28, 2024

“Now more than ever, in light of overlapping crises and evolving needs, the effectiveness of climate finance needs to be maximized, together with the impact of each dollar delivered.”

- Xie Feng, Ambassador of China to the United States, [speaking](#) in his remark to the U.S.-China Subnational Climate Action Forum on May 29, 2024

“Canada and Germany, along with the broader contributor community, recognize the importance of continuing to report on climate finance delivered in a transparent and comprehensive manner...We must engage all relevant actors.”

- Steven Guilveault, Canada's Minister of Environment and Climate Change, and Jennifer Morgan, German State Secretary and Special Envoy for International Climate Action, [explaining](#) in a formal joint statement on the delivery of the US\$100 billion climate finance goal, on May 29, 2024

“We are playing Russian roulette with our planet. We need an exit ramp off the highway to climate hell. And the truth is...we have control of the wheel. The 1.5 degree limit is still just about possible...So, stepping over the threshold 1.5 for a short time does not mean the long-term goal is shot. It means we need to fight harder.”

- Antonio Guterres, Secretary-General of the United Nations, [making](#) a special address on climate action, titled “A Moment of Truth,” on World Environment Day, June 5, 2024

“All new policies will be harder to pass. But backsliding is very unlikely.”

- Krzysztof Boleska, Secretary of State for Climate of Poland, [speaking](#) in an interview with Financial Times, on June 10, 2024

“The global humanitarian overview estimates that nearly 300 million people around the world will need humanitarian assistance which amounts to \$46.6 Million, due to armed conflicts, the adverse impacts of climate change and other drivers.”

- Celia Kafureka Nabeta, Permanent Mission of Uganda to the United Nations, [speaking](#) on behalf of the Group of 77 and China, on June 25, 2024

Climate-Focused Conferences & Events

Multinational Conferences & Global Forums

The 5th Africa Climate Talks

United Nations Economic Commission for Africa

April 22-25

Addis Ababa, Ethiopia

- From the Organizer: “In particular, this session of the ACT! will seek to mobilize the engagement of African stakeholders into defining the NDC 3.0, focusing on defining a common framework and inclusive, transparent approach to the elaboration of the NDCs to be communicated by February 2025.”
- Primary Outcomes:
 - Addis Ababa Declaration [\[English\]](#) [\[French\]](#) [\[Arabic\]](#)
 - Summary: “The Forum was attended by more than 1,250 participants, comprising ministers and high-level representatives of the Governments of 51 members of ECA, intergovernmental bodies, United Nations bodies and specialized agencies, other international organizations, major groups and other stakeholders.” [\[English\]](#) [\[French\]](#) [\[Arabic\]](#)

4th International Conference on Small Island Developing States (SIDS4)

Small Island Developing States

May 27-30

St. John's, Antigua and Barbuda

- From the Organizer: “At this time of great peril, opportunity must be seized. In Antigua and Barbuda in May 2024, the international community will gather to review SIDS’ sustainable development progress and propose a new decade of partnerships and solutions to supercharge their path to resilient prosperity.”
- Primary Outcomes:
 - [Call to Action on Mobilization of Resources for Small Island Developing States](#)
 - [The Antigua and Barbuda Agenda for SIDS \(ABAS\) – a Renewed Declaration for Resilient Prosperity \[UN Draft Version\]](#): A unanimously adopted document that puts forth a new, ambitious pathway for SIDS’ sustainable development.
 - Several [commitments](#) made by the U.S., EU, United Nations Development Programme, and the Green Climate Fund.

U.S.-China High-Level Event on Subnational Climate Action

The United States & People's Republic of China

May 29

Berkeley, California, United States

- From the Organizer: “The historic U.S.-China High-Level Event on Subnational Climate Action featured high-level leaders in a robust and action-oriented dialogue on how to advance ambitious climate action, highlighting the ways that coordinated subnational climate action can accelerate progress.”
- Primary Outcomes:
 - Following the “Sunnylands Statement on Enhancing Cooperation to Address the Climate Crisis,” experts from the two countries came to an in-depth discussion on low-carbon and sustainable developments.
 - Acknowledging the crucial role of advancing circular economy practices and resource efficiency in

tackling the climate crisis, the two countries anticipate engaging in additional technical discussions on topics such as reducing food loss and waste, improving textiles, and establishing recycling standards.

The Bonn Climate Change Conference (SB 60)

United Nations Conference on Climate Change

June 3-13

Bonn, Germany

- From the Organizer: “We’ve taken modest steps forward here in Bonn. [But] too many items are still on the table...We’ve left ourselves with a very steep mountain to climb to achieve ambitious outcomes in Baku.”
- Primary Outcomes:
 - The efficient discussions most notably led to the New Collective Quantified Goal on Climate Finance. However, parties are required to present a draft decision showing the options and the essential framework before COP29 takes place this November.
 - Steps were also taken towards developing “forward-looking, effective, and scientifically sound adaptation indicators.”
 - Progress was made towards improving the international carbon market, though additional work is needed. Transparent collaboration was achieved, building the base in formulating stronger climate action plans.
- Relevant Sessions: [The 29th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change](#)

UN/Austria Symposium 2024 Climate action: transforming space-based technology projects into sustainable services that support policy-making

United Nations

July 17-18

Hybrid

- From the Organizer: “The symposium is aimed at offering a possibility to share lessons learnt and success factors in transforming projects into sustainable services for climate action, bridging the gap between space applications and technologies providers, users and wider community.”
- Primary Objectives:
 - Identify initiatives based on space applications that have been developed and implemented globally, and promote sustainable services that help developing countries in facing climate change.
 - Discuss the space-based services that support climate policies and awareness of the Space for Climate Observatory, space-related activities, services and cooperation programs.
 - Create opportunities for cooperation and collaboration with funding organizations and international organizations.

Public Events & Panel Discussions

-Upcoming Events-

Future of Ships, Shipping and Environmental Sustainability Conference

Event by *The Institute of Marine Engineering, Science and Technology* | July 9

Climate Crossroads Summit 2024

Event by Climate Crossroads | July 16-17

Carbon Dioxide Utilization Online

Event by Active Communications International | August 6

4th Marine & Offshore Renewables 2024

Event by The Institute of Marine Engineering, Science and Technology | September 10

The European Carbon Dioxide Utilization Summit 2024

Event by Active Communications International | September 18-19

Green Shiptech China Congress 2024

Event by Ridge China | September 26-27

European Cement Decarbonisation Summit 2024

Event by Active Communications International | October 30-31

-Past Events-

Sailing to the Edge of the Carbon World: Decarbonizing Shipping from American, Chinese, and European Perspectives

Event by Wilson Center | June 26

Asia Climate Forum 2024

Event by The Asia Climate Forum | June 19-21

Saving Sand to Save the Planet

Event by Northeastern University | June 20

What's Next for Corporate Climate Disclosure?

Event by Columbia Climate School | June 17

European Sustainable Energy Week

Event by European Climate, Infrastructure and Environment Executive Agency | June 11-13

Harvard Climate Action Week

Event by Salata Institute for Climate and Sustainability at Harvard University | June 10-14

2024 Ocean Decade Conference - The Barcelona Statement

Event by Ocean Expert | June 6

2024 Natural Capital Symposium

Event by Stanford University | June 4-7

ClientEarth Summit 2024

Event by ClientEarth | June 4-6

[The High Seas Treaty and Latin America's Role in Marine Conservation](#)

Event by Wilson Center | May 28

[What Is Climate Foreign Policy? A Transatlantic Perspective](#)

Event by Carnegie Endowment for International Peace | May 15

[The Race to Decarbonize Cities and Transportation](#)

Event by Washington Post Live | May 15

[The Lithium Triangle: To Be or Not to Be Successful](#)

Event by Wilson Center | May 2

[Reducing Emissions in the Natural Gas Supply Chain](#)

Event by Center for Strategic and International Studies | May 1

[Environmental Journalists on the Frontlines of Democracy](#)

Event by Wilson Center | May 1

[The Future of the U.S. LNG Exports: A Conversation with Rep. Sean Casten and Rep. Garret Graves](#)

Event by Center for Strategic and International Studies | April 29

[International Seminar Conservation and Sustainable Use of Seaweed – International Trend and Challenges](#)

Event by Ocean Policy Research Institute of the Sasakawa Peace Foundation | April 26

[11th edition of the Regional Coastal and Marine Forum](#)

Event by Forum Prcmarine | April 23-26

[Emerging Deforestation-Free Regulatory Frameworks](#)

Event by East-West Center | April 22

[FP Climate Summit 2024](#)

Event by Foreign Policy | April 18

[A New Avenue for ROK-US Climate Change Cooperation: Under the Indo-Pacific Strategy, toward the Pacific Islands](#)

Event by East-West Center | April 10

[Climate Change Adaptation Strategies: Lessons from Artificial Island Development in the Maldives](#)

Event by Sasakawa Peace Foundation, The Maldives National University, Global Infrastructure Fund Research Foundation Japan, and Hosei University | April 10

ICAS & BCCC Program Updates

MAP/BCCC Commentary

A Landmark Advisory Opinion: ITLOS Strengthens Legal Framework for Climate Action

By Nong Hong
May 28, 2024

On May 21, 2024, the International Tribunal for the Law of the Sea (ITLOS) issued a groundbreaking Advisory Opinion on climate change, which marks a historic first – an international legal body directly addressing state obligations for mitigating climate change, a critical step forward in holding nations accountable for their actions.

The request made to ITLOS in December 2022 by the Commission of Small Island States on Climate Change and International Law seeks clarification on states' obligations under UNCLOS regarding the prevention, reduction, and control of marine pollution, as well as the protection and preservation of the marine environment in relation to climate change impacts. This is the first time an advisory opinion has been sought on issues specifically related to sea-level rise and climate change more broadly.

The opinion dives deep into the application of the United Nations Convention on the Law of the Sea (UNCLOS) within the context of climate change...

[Continue Reading:](#)

<https://chinaus-icas.org/research/a-landmark-advisory-opinion-itlos-strengthens-legal-framework-for-climate-action/>



BCCC Quarterly Release

Blue Carbon & Climate Change Quarterly: 2024 Q1 (Chinese)

The first week of 2024, the ICAS Blue Carbon & Climate Change Program released its BCCC Quarterly newsletter for 2024 Q1. Soon after, its condensed, Chinese-language counterpart was also released as part of efforts for both sides to have access to our research on this critical topic.

[Explore the Full BCCC Quarterly Archives:](#)

<https://chinaus-icas.org/icas-blue-carbon-climate-change-program/bccc-quarterly/>

[Read BCCC Quarterly 2024 Q1 \(In Chinese\):](#)

<https://chinaus-icas.org/wp-content/uploads/2024/05/ICAS-BCCC-Quarterly-2024-Q1-CHN.pdf>



ICAS In the News

On Monday, April 1, 2024, Senior Fellow Sourabh Gupta was [quoted](#) by *China Daily* on Chinese EVs and Treasury Secretary Yellen's speech on excess capacity in China's EV sector.

- "Even more impressive than the provision of these large-volume, low-price green products is the Chinese government's resolve to stand behind and support the creation of markets at scale for these products, such that many renewables and green products are cost-competitive today..."

On Thursday, May 9, 2024, Research Associate Yilun Zhang was [interviewed](#) on *GD Today* about how opportunities and challenges coexist in China's pursuit of new 'quality productive forces' like electric vehicles.

- "Traditionally, China's economic model has been export-driven, driven by cheap but scalable labor...but now that has changed because China's demographics have changed and because of the economic transformation where it is moving up the value chain."
- "Now China's primary competitor is the developed countries. They have high technology, and China is going to be one of them...China needs to generate more investment into this innovation to boost its production force."



On Wednesday, June 5, 2024, non-resident Fellow Denis Simon was [quoted](#) by *Nature* on China's ambitions and developments within its science and technology ecosystem.

- "A focus on big science is the next phase in China's rapid ascendancy in the global research hierarchy."
- "The prestige that comes from building and operating massive facilities, which are designed to produce large amounts of data and insights that can feed into multiple fields and industries, could further cement the country's status as a science superpower."

ICAS Announcement

ICAS Will Be Looking for a Part-Time Intern for Fall 2024!

Interested in gaining first-hand experience on exploring, analyzing and writing on top issues in U.S.-China relations? Looking for a place to improve your professional skills and learn about think tank operations in Washington, D.C.?

Stay tuned for an upcoming announcement on our website, newsletters, and social media to see how you can apply to join our team in Washington, D.C.!

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We aim to provide a window into the worldviews of both the United States and China, and thereby serve as a vehicle to promote greater understanding between these two countries and societies.

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ISSN (Print): 2837-3952 ISSN (Online): 2837-3979



1919 M St. NW Suite 310
Washington, DC 20036
202 968-0595 | www.chinaus-icas.org