BCCC

ICAS
Institute for China-America Studies

ICAS Blue Carbon & Climate Change Program

Quarterly

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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.

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ICAS Blue Carbon & Climate Change Quarterly

BCCC

October - December 2025

Contents

This Season's Global Climate Affairs

Issues & Updates on Blue Carbon

Philippines Scales Blue Carbon with $1 Billion Financing, Blue Economy Law

Monday, December 22
Source: *Reccessary*
[The Philippines]

The Philippines is scaling up blue carbon and marine conservation efforts through nearly $1 billion in international financing and the passage of a national blue economy law. Asian Development Bank has approved a $500 million policy-based loan, alongside co-financing from France's Agence Française de Développement and Germany's KfW, to support climate-resilient management of coastal and marine ecosystems.

Indonesia Strengthens Blue Carbon Standards for Climate Action

Monday, December 15
Source: *Antara*
[Indonesia]

Indonesia's Marine Affairs and Fisheries Ministry launched the country's first national manual for measuring blue carbon in seagrass ecosystems, aiming to improve data credibility, conservation outcomes, and readiness for carbon trading. Officials said standardized and science-based measurement is essential to strengthen Indonesia's contribution to global climate mitigation.

Liberia Launches First National Mangrove Inventory to Boost Blue Economy

Monday, December 15
Source: *Daily Observer*
[Liberia]

Liberia launched its first National Mangrove Inventory through the Environmental Protection Agency and Conservation International. The inventory will provide data on mangrove coverage, health, and carbon storage to support climate planning, carbon markets, and community livelihoods, alongside a proposed $3.2 million national budget for restoration and protection.

"Blue Carbon Shenzhen Model" Debuts at UN Climate Change Conference, Showcasing Shenzhen's Contribution to Global Climate Governance and Sustainable Development

Tuesday, November 18
Source: *GlobeNewswire*
[Brazil, China]

At COP30 in Belém, Shenzhen, China showcased its "Blue Carbon Shenzhen Model" during a special session, highlighting its mangrove conservation and carbon sink trading practices. Shenzhen presented its record-setting mangrove carbon sink auction, released an English methodology for mangrove carbon projects, and signed a cooperation agreement with Local Governments for Sustainability (ICLEI) to promote international blue carbon collaboration.

Indonesia-South Korea Explore Mangrove, Blue Carbon Cooperation

Sunday, November 16
Source: *Antara*
[Indonesia, South Korea]

Indonesia and South Korea discussed new cooperation on mangrove restoration and blue carbon development during a bilateral meeting at COP30 in Belém. The talks focused on sharing Indonesia's experience in rehabilitating mangroves and exploring joint programs involving technology, research, and innovation on coastal resilience. Both sides agreed to form a technical team, with Indonesia facilitating future projects aligned with its FOLU Net Sink 2030 target.

Government Launches Major Mangrove Push to Restore Ennore Creek

Sunday, November 16
Source: *The News Minute*
[India]

Chennai's Ennore Creek is showing early signs of ecological recovery as authorities launch a large-scale mangrove restoration program using the "fishbone" tidal-channel method to improve water circulation and sapling survival. The Forest Department is planting 20,000 mangroves across 15 hectares this season, building on last year's introduction of 180,000 saplings. Once established, the restored mangroves are expected to enhance biodiversity, support fisheries and local livelihoods, and provide critical habitat for birds.

Scotland Charity's Record Survival Rates in Seagrass Transplant Trials

Tuesday, November 4
Source: *Oceanographic Magazine*
[The United Kingdom]

Scotland's community-based charity Seawilding reported a major breakthrough in seagrass restoration by transplanting adult shoots, boosting seabed coverage from 10% to 70% in 15 months with survival rates up to 97%. The method has created 0.3 hectares of new seagrass habitat with minimal impact on donor meadows, making it one of the UK's most successful restorations to date. The approach offers a scalable model to restore declining seagrass ecosystems.

Indonesia Eyes Seagrass Zoning for Blue Carbon; Experts Urge Community Benefits

Tuesday, October 7
Source: *Mongabay*
[Indonesia]

Indonesia plans to designate 17 seagrass habitats as national strategic areas for blue carbon, aiming to cut emissions, protect marine ecosystems, and support coastal livelihoods. The fisheries ministry says seagrass stores carbon far more efficiently than rainforests, while experts caution that the scheme must ensure transparent governance, prevent privatization, and guarantee fair benefit-sharing.

Environmental Protection

News on Environmental Protection:

- **The United Kingdom**: UK wildlife charity, The Wildlife Trusts, has dubbed 2025 the "Year of the Blooming Octopus" after record numbers were spotted off southwest England. Experts say the surge is a result of warmer winters associated with climate change, and is dominated by warm-water species typically found in the Mediterranean, proving that rising sea temperatures are reshaping marine ecosystems around the UK. (*BBC News*, December 22)

- **Chile**: A vast stretch of Chilean Patagonia's Cochamó Valley has been permanently protected after local groups raised $63 million to buy 133,000 hectares of pristine wilderness, safeguarding it from logging, dam construction, and large-scale development. Led by the NGO Puelo Patagonia, the grassroots effort transferred the land to the Chilean nonprofit Fundación Conserva Puchegüín. The deal marks one of the most significant community-driven conservation successes in Chile. (*The Guardian*, December 19)

- **Ghana**: Ghana has formally banned mining in forest reserves. The move aims to protect forests, water bodies, and farmland amid a surge in illegal small-scale mining that has driven deforestation and pollution. The government says the ban strengthens legal tools to safeguard ecosystems and community livelihoods. (*Reuters*, December 16)

- **The United States & Mexico**: The two countries have signed a new agreement to address the long-running Tijuana River sewage crisis, under which untreated wastewater from Mexico has flowed across the border and into the Pacific near San Diego. The deal commits both countries to better manage the wastewater of the Tijuana River to protect people from both countries living alongside the river. (*Reuters*, December 15)

- **Ukraine:** Ukrainian and international officials say radiation levels around the Chernobyl nuclear plant remain normal despite a Russian drone strike in February that punctured the New Safe Confinement dome to contain Reactor No. 4 and enable long-term cleanup. While temporary patches are in place, repairing the structure permanently will be complex and hazardous, and the IAEA warns that timely restoration is critical to prevent further deterioration and ensure long-term nuclear safety. (*The New York Times*, December 7)

- **The European Union:** The European Commission delayed and softened its anti-deforestation law for a second time, pushing implementation to December 2026 for large companies and mid-2027 for small ones, amid pressure from member states, business groups, trade partners, and right-wing lawmakers. The deal introduces simpler due-diligence requirements, excludes printed products such as books, and orders a review next April of the law's administrative burden. The Commission says the goal remains environmental protection without unnecessary burdens. (*Politico*, December 4)

- **Australia**: Australia is set to overhaul its decades-old environmental laws after the Labor government struck a last-minute deal with the Greens to pass reforms establishing the country's first independent national environment regulator. The new law would both strengthen protections for native forests, wildlife, and high-risk land clearing while also speeding up approvals for priority projects in housing, renewable energy,

and critical minerals. (*BBC News*, November 26)

- **The United States:** The U.S. Environmental Protection Agency has proposed a new "Waters of the United States" (WOTUS) rule that significantly narrows the scope of wetlands protected under the Clean Water Act. The rule would limit federal jurisdiction to relatively permanent bodies of water and wetlands, removing protections from many previously covered areas. The Trump administration argues this will reduce regulatory uncertainty and federal overreach, while environmental groups warn it weakens safeguards against pollution, flooding, and climate-driven extreme weather. (*AP News*, November 17)
- **Global**: Environmental news organization Mongabay has launched a dedicated Oceans Desk to expand its coverage of oceans, fisheries, and marine conservation amid escalating threats from overfishing, pollution, habitat loss, and climate change. The new desk brings together a global team of specialized journalists and builds on Mongabay's growing body of impactful marine reporting. (*Mongabay*, November 11)
- **Brazil**: Brazil has launched the Tropical Forests Forever Facility ahead of COP30, a new global fund designed to pay countries for verified forest conservation and make standing forests more economically valuable than deforestation. The initiative could channel up to $4 billion annually to as many as 74 tropical forest countries. Backed by an initial $1 billion pledge from Brazil, the fund also aims to mobilize $25 billion from governments and over $100 billion from private investors. (*UN News*, November 6)
- **Brazil**: Brazil has granted state oil giant Petrobras permission to begin exploratory drilling in the Foz do Amazonas basin, near the mouth of the Amazon River. The decision has sparked backlash from environmental groups and civil society, who argue the move undermines Brazil's climate leadership and poses serious risks to biodiversity in a highly sensitive marine ecosystem. (*The Guardian*, October 20)

Climate Policy & Diplomacy

Simplifications are Not a Retreat for the European Union

What is Happening

- The EU is preparing new price-control measures for its upcoming carbon market to prevent fuel-cost spikes and public backlash, including doubling the number of permits released if prices rise too high and starting auctions early to give governments funds for the clean-energy transition. (*Bloomberg*, October 20)
- The European Commission has firmly rejected U.S. demands to roll back or exempt American companies from the EU's environmental and corporate due-diligence rules, stressing that European lawmaking autonomy is "not up for discussion." The pushback follows U.S. requests to weaken the EU's Corporate Sustainability Due Diligence Directive (CSDDD). While the issue was referenced in a recent EU-U.S. trade agreement as an area for dialogue, Brussels insists it is focused on implementing existing climate-related legislations. (*Euronews*, October 9)
- The European Union plans to use its proposed 200-billion-euro Global Europe development fund for 2028-2034 to support countries affected by the upcoming carbon border adjustment mechanism (CBAM), aiming to ease concerns from partners such as Brazil, South Africa and India while still moving forward with the tariff. Brussels will not roll back climate laws but will work to build cleaner industrial partnerships, including in renewable energy and hydrogen. (*Reuters*, October 16)
- The EU's carbon border adjustment mechanism (CBAM) has become a major flashpoint at COP30, where developing countries accuse the levy and other EU green trade measures of being protectionist. European negotiators defend CBAM as a climate tool necessary to prevent carbon leakage and encourage global carbon pricing, while China, India, Saudi Arabia, and others warn it raises transition costs and use the issue for leverage in broader negotiations. (*Politico*, November 18)
- The European Commission has confirmed to simplify sustainability reporting and due diligence requirements, and is awaiting endorsement by the European Council and Parliament. Small and medium enterprises (SMEs) with less than 1000 employees are removed under the Corporate Sustainability Reporting Directive (CSRD). The participating threshold for CSDDD is increased to companies with more than 5,000 employees and €1.5 billion net turnover. The Commission insists the changes will not weaken environmental protections. (*European Council*, December 9)
- The EU reached a deal to set a legally binding target to cut greenhouse gas emissions by 90% from 1990 levels by 2040, with 5% of those reductions to be met through foreign carbon credits. The new agreement is weaker than the European Commission's original proposal, and delays the start of a new carbon pricing system for fuels for 1 year to 2028. (*Reuters*, December 10)
- The European Commission reversed its 2035 ban on producing new internal combustion engine (ICE) cars and opted for a softer 90% reduction target from 2021 levels, and allows hybrids and ICE vehicles to remain on the market. The broader automotive package also relaxes 2030 interim emissions targets, introduces a regulation to green corporate fleets, offers incentives for small EVs, and embeds local-content requirements. The Commission maintains that its long-term climate

ambitions remain intact despite the significant rollback. (*Politico*, December 16)

Why it Matters

The European Union's policy direction this year is defined by a wave of simplification packages often referred to as the "simplification omnibus." The packages aim to cut red tape and ease compliance burdens associated with climate legislation. The Commission presents these reforms as efforts to reduce administrative strain rather than dilute environmental ambition. These reforms coexist with new climate steps such as the 2040 emissions target and continued defense of CBAM in global negotiations. The trend therefore reflects not the dismantling of the Green Deal but a recalibration of how it will be executed.

The drivers behind this shift are rooted in the negative economic impacts of these regulations and changed incentives of President of the European Commission Ursula von der Leyen's second term. Member states facing weak industrial and trade performance demanded regulatory easing, particularly for automotive manufacturers confronting weak electric vehicle sales and competitive threats. The post-2024 Parliament is also more right-leaning, and the European People's Party (EPP) has repositioned itself around deregulation and industrial competitiveness. Von der Leyen now governs through this political landscape and must align with the EPP's 2024 commitments to "cut red tape".

These deregulatory moves make operational sense. Many of the policies being adjusted are either not yet fully in force or still in transition phases, such as CBAM, the sustainability reporting directives, and the ban on new internal combustion engine cars. Applying maximal stringency at this stage would risk disruptions for companies and member-state authorities still building administrative capacity to implement the rules. The Commission's decision to ease due-diligence and reporting thresholds for SMEs reflects acknowledgement of the implementation gap where member states lack the personnel, and smaller firms lack the systems to absorb the entire regulatory package at once. A sequencing approach of "build first, tighten later" reduces the risk of non-compliance and costly delays, particularly when diplomatic tensions are already high, as illustrated by the CBAM disputes at COP30.

More broadly, the policy logic behind simplification reflects a shift from designing ambitious climate law to making it executable. The first wave of Green Deal measures was comprehensive but often heavy from an operational perspective. The resulting compliance demands triggered political backlash among farmers and SMEs, leading to calls for targeted relief. The EPP's policy shift and new alliance patterns reflect this political need to address cost pressures without abandoning green objectives. The simplification packages therefore aim to preserve the EU's long-term climate ambition, which is something Brussels emphasized repeatedly, while reducing friction so that companies and administrations can realistically meet the obligations.

Ultimately, the EU is transitioning from legislating climate ambition to implementing it. Simplification is part of that transition, helping maintain political support and limit backlash while keeping the long-term goals of net zero by 2050 and a credible 2040 trajectory intact. Environmental legislation must rest on a foundation of healthy economic development, rather than impose burdens that risk undermining it. Simplification can support that balance, but only if it preserves the baseline the EU has built. The challenge ahead is to strike a balance between pragmatic regulation that industries and member states can absorb and environmental standards that remain strong enough to drive meaningful climate progress.

When The Environmental Protection Agency Becomes Environmental Destruction

What is Happening

- The U.S. Environmental Protection Agency (EPA) is fast-tracking reviews of new chemicals used in data centers, citing the need to accelerate AI and digital infrastructure development. Critics warn it could weaken safeguards under the Toxic Substances Control Act. Public health and environmental advocates argue the effort could allow hazardous substances to reach the market with insufficient scrutiny, increasing risks to workers, nearby communities, and water systems. (*Inside Climate News*, October 2)
- Five months before catastrophic flooding devastated the Alaska Native village of Kipnuk, the EPA canceled a $20 million grant meant to stabilize the village's riverbank against erosion and floods. The latest disaster shows the consequences of the EPA cutting pre-disaster adaptation funding for underserved Arctic communities. (*The New York Times*, October 14)
- EPA administrator Lee Zeldin is backing away from plans to eliminate Energy Star after strong bipartisan and business pushback. The reversal underscores Energy Star's political durability as a widely recognized, low-cost program credited with saving U.S. households and businesses tens of billions of dollars annually in energy bills, even as the Trump administration continues rolling back other climate and efficiency initiatives. (*The New York Times*, November 1)
- The EPA has moved to roll back key air-pollution protections by asking a federal court to strike down the 2024 soot (PM2.5) standards and by proposing a three-year delay for coal plants to clean up coal ash waste. The soot rule, finalized under President Joe Biden, was projected to prevent thousands of premature deaths and hundreds of thousands of asthma cases annually, and is already met by most coal plants. The administration argues the standard is too costly and insufficiently grounded in science. (*Reuters*, November 25) (*The Guardian*, November 26)
- The EPA has delayed enforcement of a Biden-era rule requiring oil and gas companies to curb methane emissions and pushed the compliance start date to January 2027. The agency's own estimates show the delay could add 3.8 million tons of methane to the atmosphere. EPA Administrator Lee Zeldin said the move would save industry $750 million in compliance costs and prevent regulations from constraining U.S. energy production. However, methane is a super-pollutant responsible for nearly a third of global warming to date. (*The New York Times*, November 26)
- The EPA has revised its climate change webpages to remove explicit references to fossil fuel burning as the primary cause of global warming, instead emphasizing natural factors such as solar activity and volcanic eruptions. Scientists and former EPA officials warn the changes are misleading, noting that nearly all observed warming is driven by human activities and the altered pages contradict longstanding scientific consensus and earlier EPA explanations. Critics also argue the edits undermine public understanding and education. (*Independent*, December 9)

Why it Matters

The U.S. Environmental Protection Agency is rapidly transforming into something dangerously unrecognizable. Once a global symbol of environmental stewardship, the EPA under the Second Trump Administration has become an instrument of environmental backsliding, sidelining science in favor of

short-term political and economic goals. Under the guise of boosting economic growth and national competitiveness, the agency has accelerated the approval of hazardous chemicals, weakened air pollution controls, delayed methane rules, and even altered its public messaging to deny human-driven climate change. But this is not just about economics, it's also about politics. Republican leaders have increasingly treated climate policy as a partisan battleground, dismantling environmental protections not because of new evidence, but simply because they were created by Democrats. The result is a science-averse EPA whose decisions reflect political identity more than environmental responsibility.

This anti-regulatory zeal has already caused visible harm. In Alaska, the EPA canceled a $20 million adaptation grant for the village of Kipnuk just months before catastrophic flooding destroyed homes and infrastructure. The agency argued that the project wouldn't have been completed in time, conveniently ignoring the long-term erosion risks it was meant to address. Elsewhere, the EPA is fast-tracking chemical approvals for AI and digital infrastructure, raising alarms about weakened oversight under the Toxic Substances Control Act. And by rolling back Biden-era soot standards and coal ash cleanup deadlines, the agency is putting thousands of lives at risk for the sake of regulatory "cost savings." Perhaps most disturbing, it has revised its own climate webpages to downplay the role of fossil fuels, invoking solar activity and volcanic eruptions in what amounts to scientifically unfounded climate denial. This shift not only contradicts decades of EPA research but also misleads the public and erodes the agency's credibility.

What we are witnessing is an environmental policy framework increasingly governed by ideological stubbornness and economic short-termism. The long-term damage of methane pollution, toxic exposure, and climate denial will far outweigh any short-term political or economic "gains." These decisions are likely to undercut future economic stability, increase disaster recovery costs, and accelerate the social burdens of displacement and health crises. In the long run, environmental destruction is economic destruction, and ignoring this truth is neither pro-growth nor pro-America.

Internationally, the consequences of this reversal are even more corrosive. The U.S. has long served as a reference point for global climate action. If the world's largest economy abandons climate science and responsibility, it becomes nearly impossible to persuade other nations—especially low-income and high-risk ones—to invest in decarbonization. The EPA's backslide therefore risks undermining not only U.S. progress but global cooperation. This regression also highlights a structural gap in international climate governance: the lack of binding mechanisms to prevent major emitters from abandoning climate commitments. In the future, the international community may need stronger institutional safeguards to deter such unilateral backsliding and protect collective progress.

Still, lessons are learned from this grim picture. One is the unexpected resilience of the Energy Star program. The Trump administration backed away from eliminating it following bipartisan and business pushback, showing that when environmental policy is clearly tied to economic benefits—such as household savings on energy bills—it becomes politically resilient. This offers a key lesson: the future of climate policy must rest not only on environmental necessity but also on demonstrating economic return. If we want to defend environmental protection against anti-regulatory politics, we must anchor it in cost-saving, job-creating, livelihood-improving terms. The failure of the EPA shows us what happens when we don't; the survival of Energy Star shows us a way forward.

More on Climate Policy & Diplomacy:

- **Switherland**: A Swiss court has agreed to admit a climate lawsuit against Swiss cement maker Holcim, brought by four residents of Indonesia's flood-prone Pari island who argue the cement giant is contributing to sea-level rise by cutting emissions too slowly. While the decision could still be overturned on procedural grounds, it marks the first time a Swiss court has accepted climate litigation against a major corporation. (*Reuters*, December 22)
- **Canada**: Canada's federal government has unveiled new regulations to curb methane emissions from the oil and gas sector and landfills, with phased implementation starting in 2028. Ottawa estimates the rules will cut a combined 404 megatonnes of CO_2-equivalent emissions by 2040. (*Toronto Star*, December 16)
- **China**: According to a senior Chinese climate advisor, China remains committed to accelerating its energy transition and supporting vulnerable countries with climate finance, but does not want to shoulder global climate leadership alone in the absence of the United States. (*The Guardian*, November 19)
- **South Korea**: South Korea has approved a new climate target to cut greenhouse gas emissions by 53% to 61% by 2035 compared with 2018 levels. (*Reuters*, November 11)
- **China**: At the COP30, China's Vice Premier Ding Xuexiang called for the removal of trade barriers that are slowing the global energy transition and urged countries to practice "true multilateralism" on climate action. He stressed the need for stronger international cooperation on green technologies, the free flow of clean-energy products, and for developed countries to lead on emissions reductions while honoring climate finance commitments to developing nations. (*Reuters*, November 6)
- **Singapore**: Singapore's environment minister Grace Fu warned that momentum on global climate action is weakening as geopolitical tensions, high energy and food prices, and shifting political priorities create growing headwinds. Meanwhile, Fu noted that Singapore has signed 10 implementation agreements so far on advancing carbon markets. (*Reuters*, November 6)
- **Australia**: Nationals Party abandoned the commitment to reach net zero emissions by 2050, opting instead to prioritize climate adaptation and slower emissions cuts aligned with the OECD average. Party leader David Littleproud argued that Australia is "racing ahead" on emissions reductions at an unfair cost to regional communities. The decision has drawn sharp criticism, which warns that delaying mitigation will ultimately impose far higher economic and human costs. (*ABC News*, November 1)
- **The United States**: Nearly two dozen U.S. states are suing the Trump administration over its cancellation of the EPA's $7 billion *Solar for All* program, arguing that the move unlawfully eliminates congressionally approved funding meant to expand solar access in low-income communities. State attorneys general say the decision will raise energy costs, halt projects in disadvantaged and tribal communities, and undermine clean energy deployment nationwide. (*Reuters*, October 16)
- **The United States**: Plans to introduce a global carbon tax on the shipping sector face renewed uncertainty after the United States moved to block adoption of the International Maritime Organization's

Net-Zero Framework. The framework aims to reduce emissions from international shipping by incentivizing cleaner fuels and supporting vulnerable states. While the proposal has broad backing from many governments and shipping industry groups, the Trump administration has opposed it, arguing it would raise shipping and consumer costs. (*The Times*, October 16)

- **Colombia**: Colombia has submitted its updated climate targets for 2035 to the United Nations ahead of COP30 in Brazil. While the move provides continuity in the country's climate pledges, experts have raised concerns about whether the targets are sufficiently ambitious and how they will be implemented in practice. (*El Espectador*, October 14)

- **China & Iceland**: China and Iceland announced plans to deepen cooperation on geothermal and other green energy technologies, strengthening bilateral collaboration on emissions reduction and energy transition. The partnership will focus on accelerating clean energy deployment, promoting low-carbon development, and creating green jobs and business opportunities. (*Reuters*, October 14)

- **The United States**: The U.S. Energy Department is moving to cancel nearly $24 billion in funding for more than 600 climate-related projects as the Trump administration continues to dismantle Biden-era climate policies during the government shutdown. The cuts affect early-stage carbon capture, hydrogen and clean energy projects across both Democratic- and Republican-led states. (*The Wall Street Journal*, October 7)

- **Dutch-Caribbean**: Residents of Bonaire told a Dutch court that climate change has made the island increasingly unlivable through extreme heat, drought and rising sea levels, despite the island contributing little to global emissions. They ask judges to order the Netherlands to accelerate emissions cuts and reach net zero by 2040, arguing the state has failed to adequately protect the island under international climate obligations. (*Reuters*, October 7)

- **The United States**: The Trump administration has canceled $7.6 billion in federal grants supporting 223 clean energy projects across 16 U.S. states after an Energy Department review concluded the projects did not sufficiently advance national energy needs or economic viability. The terminated funding affected projects related to hydrogen, batteries, grid upgrades, and carbon capture. Some states and Democratic leaders accused the move of being politically motivated. (*The Guardian*, October 4)

- **Vatican City**: Pope Leo XIV issued his first major climate statement, warning that the impacts of global warming are "increasingly evident" and condemning efforts to ridicule or deny climate science. Echoing Pope Francis, he framed climate action as a moral responsibility, stressing that environmental damage disproportionately harms the poor and that indifference is no longer acceptable. The Pope urged citizens worldwide to pressure political leaders for stronger action, reinforcing the Catholic Church's continued engagement in global climate efforts for future generations. (*BBC News*, October 1)

Clean Energy & Technology

Renewables Are Overtaking Coal as the World's Power Backbone

What is Happening

- Global wind and solar power generated more electricity than coal for the first time in the first half of 2025, marking a major turning point in the global energy system. Rapid growth in solar and wind met rising electricity demand and led to a decline in coal and gas use worldwide, driven primarily by China and India. In contrast, the US and EU saw increases in coal and gas generation due to weaker renewable growth and weather-related factors. The IEA projects global renewable capacity could more than double by 2030, led overwhelmingly by solar. (*The Guardian*, October 6)

- In the first half of 2025, China accounted for more than half of global solar growth and over 80% of wind growth, allowing it to meet all domestic electricity demand increases with clean energy alone. As a result, China's fossil fuel power generation fell by 2%, leading to the world's largest absolute decline in power-sector CO_2 emissions and helping offset rising emissions in the U.S. and EU. With combined wind and solar capacity now exceeding coal capacity, China is laying the foundation for sustained decarbonization and a global shift away from fossil fuels. (*CGTN*, October 7)

- India recorded a notable decline in fossil fuel power generation in the first half of 2025 as rapid growth in solar and wind outpaced electricity demand. According to Ember and the IEA, record renewable additions allowed clean power to grow faster than demand, leading to reduced coal use and a 3.6% drop in power-sector emissions. India is on track to meet its 2030 renewable target, with capacity expected to rise 2.5 times within five years. (*Hindustan Times*, October 8)

- Australia also generated more electricity from renewable sources than from coal for the first time on record. Renewables produced 9.24 terawatt hours of electricity, surpassing coal's 8.8 terawatt hours. The milestone was driven by strong wind generation in Tasmania and robust solar output nationwide. (*The Guardian*, October 12)

- Morocco has committed to phasing out coal power by 2040, contingent on receiving sufficient international support, and pledged to eliminate coal entirely by the 2040s regardless. This marks the country's first official coal phase-out timeline since joining the Powering Past Coal Alliance. Coal still accounted for about 59% of Morocco's electricity mix in 2024, but this share has fallen sharply as wind and solar grew to nearly 25%. Morocco plans to triple renewable capacity to over 15 GW by 2030. (*Morocco World News*, October 25)

- Europe's electricity grids are increasingly strained as rapid growth in solar power pushes voltage beyond safe limits, triggering frequent alerts and raising blackout risks. Solar capacity has more than quadrupled in a decade, and in 2024 voltage breaches rose to 8,645 incidents, contributing to major outages such as the Spain-Portugal blackout earlier this year. Grid operators are now urging regulatory changes and new technologies to manage high solar output and stabilize the system. (*Bloomberg*, October 28)

- Severe air pollution in Kakanj, Bosnia and Herzegovina, has prompted local authorities to demand that the coal-fired power plant cut operations to district heating only, amid dangerously high sulfur dioxide levels. Officials are also seeking updates on a delayed desulfurization project intended to cut SO_2

emissions by nearly 99%. (*Balkan Green Energy News*, November 18)

- Pakistan's rapid rooftop solar boom is set to fundamentally reshape its power system, with solar generation expected to exceed grid electricity demand during daytime hours in major industrial regions as early as next year. Driven by high tariffs and power outages, solar adoption has lowered emissions and household energy costs. Although the expansion of renewable energy is no longer an issue, upgrading the power grid remains a challenge for Pakistan. (*Reuters*, November 23)

Why it Matters

For the first time, global wind and solar generated more electricity than coal in early 2025, marking not only a symbolic milestone but a structural shift in the global energy system. This change is happening despite rising electricity demand, not because of stagnant consumption, showcasing the growing competitiveness, scalability, and policy maturity of clean energy. In the still rapidly growing economies like China and India, renewables are not just keeping up but also pulling ahead. These countries have decisively demonstrated that clean power can meet real energy needs, support development, and still reduce emissions as the more efficient and economic option, all without relying on coal.

The growing momentum of renewable energy is no longer limited to the wealthy or the idealistic. Indeed, Australia has crossed the same threshold as a representative of the developed world, but Morocco has also pledged a full coal phase-out. Pakistan is proving that distributed solar can empower households and businesses even in the absence of a modernized grid. These developments expose the old myth that clean energy is only viable for rich countries. In fact, the strongest recent gains are coming from middle-income and even lower-income economies—driven not just by climate ideals, but by economic logic. Clean energy is now cheaper, faster to deploy, and less politically volatile than fossil fuels.

Yet this turning point also highlights what happens when countries *fail* to build on momentum. Europe, long seen as a clean energy leader, is now facing reliability concerns due to strained grids and weather volatility, while U.S. progress is faltering under renewed political hostility to renewable policy. These setbacks are not due to clean energy itself, but to missing infrastructure upgrades and deliberate policy reversals. Meanwhile, countries like Bosnia are experiencing direct public health damage from continued coal reliance, showing that delay carries real human costs.

All in all, countries that still choose to resist this shift are not just lagging. They are choosing higher costs, deeper risks, and preventable harm. And for those moving forward, the next test is not whether to scale renewables, but how to ensure that grids, governance, and global coordination can keep pace with this accelerating transformation.

Green Hydrogen Needs Wholistic Approach on Both Supply and Demand

What is Happening

- The US Department of Energy has cancelled federal funding for two major hydrogen hubs in California, which together had been slated to receive more than $2 billion under the The Infrastructure Investment and Jobs Act. While federal support has been withdrawn, project developers and industry groups said they plan to continue pursuing hydrogen development, citing

ongoing demand, state-level backing, and extended eligibility for federal hydrogen tax credits. (*Renewables Now*, October 6)

- The US Department of Energy is planning to terminate the remaining federally backed hydrogen hubs. The decisions reportedly were already forwarded to the Office of Management and Budget. A second wave of project cancellations flamed fears across both public and private sectors that federal clean energy investment could be gutted before mid-decade. (*Fuel Cells Works*, October 8)
- A new catalyst developed at Rice University could significantly lower costs and supply risks for the green hydrogen industry by sharply reducing reliance on iridium, one of the scarcest and most expensive materials used in PEM electrolyzers, by more than 80%. The breakthrough removes a major bottleneck on the cost of scaling green hydrogen production. (Rice University, October 13)
- Washington State's Douglas County Public Utility District has launched the state's first green hydrogen project, introducing a 5-megawatt electrolyzer and fueling station that represents the state's first such effort led by a public utility. The project is designed to produce cleaner energy, lower fuel costs for local partners, and reduce pressure on regional hydropower dams. (*NonStop Local Tri-Cities/Yakima*, October 14)
- German renewable energy company ENERTRAG broke ground on a new green hydrogen production plant in Wensickendorf, Brandenburg, designed to produce green hydrogen using solar and wind power. The 4-megawatt facility is expected to begin operations in 2026 and generate up to 380 tonnes of green hydrogen annually, with most of the output dedicated to supplying the Heidekrautbahn (RB27) rail line between Barnim and Berlin. The project aims to establish Germany's first hydrogen-powered regional railway system and create a local, climate-friendly hydrogen value chain. (*Power*, October 17)
- India expects some export-oriented green hydrogen projects to be delayed as global policy uncertainty, particularly slow decisions in Europe on renewable targets and delays to shipping decarbonization milestones, cloud near-term export demand. The government now targets around 3 million tonnes of green hydrogen production by 2030, with the original 5 million-tonne goal pushed to 2032, while emphasizing domestic demand growth through shipping, methanol production, and refinery tenders to stabilize the market. (*Reuters*, November 11)
- 2 out of Oman's 9 planned green hydrogen projects have been shelved due to concerns about a growing mismatch between supply and demand for the fuel. The canceled projects were ended by mutual agreement with developers, including one involving BP and another led by Engie and POSCO. The remaining seven projects are still moving ahead, with a goal of producing 1 million tonnes of green hydrogen annually by 2030, and it plans to launch a third land auction backed by $3.6 billion in incentives. (*Semafor*, December 3)

Why it Matters

Green hydrogen has long been promoted as a critical piece of the clean energy transition. It offers a pathway to decarbonize sectors that are difficult to electrify directly, such as heavy industry, long-distance transport, and certain forms of machinery where batteries remain too heavy or impractical. It can also function as a form of energy storage, absorbing excess renewable power when supply outstrips demand. In theory, green hydrogen fills some of the most stubborn gaps in a low-carbon energy system.

In practice, however, scaling green hydrogen has proven far more complicated. The sector faces a fundamental dilemma: production needs to be cheap enough to compete with fossil-based alternatives, yet demand must be large and reliable enough to justify the investments required to bring costs down. Today, neither condition is fully met. Demand remains limited, while production costs remain high, locking the industry into a coordination trap in which producers, buyers, and investors each wait for the others to move first.

Recent developments in hydrogen technology, such as the newly introduced catalyst by Rice University, show that innovation itself is not the main constraint. Yet such breakthroughs remain at the laboratory or pilot stage. They are not commercially available at scale, and translating them into deployable infrastructure requires sustained capital, time, and market confidence in future demand.

Governments play an important role in boosting private investment in this sector. Without a continued federal anchor, investor confidence weakens, resulting in a regional stall in hydrogen ecosystems, and the pathway to cost reduction becomes far less certain. In the United States, the Department of Energy's cancelled federal funding and the ongoing plan to defund signal a sharp reversal of the national clean hydrogen strategy launched just a few years earlier. While developers insist that projects will continue with state-level support and hydrogen tax credits, the cancellation of flagship hubs undermines the original purpose of the program to simultaneously build supply, demand, and infrastructure at a regional scale.

Global developments face the problem of insufficient demand. There wasn't enough market signal for green hydrogen producers to ensure that their product has a place to be. As a result, many hydrogen production projects worldwide were hindered or reduced, such as India's national production goals, Oman, and Saudi Arabia's flagship NEOM hydrogen project. All of these reinforce the risk of supply-first strategies in immature markets.

Germany offers a partial counterexample. By tying production to a guaranteed demand source, the project reduces market risk and supports the creation of a local hydrogen value chain. While modest in scale, the approach highlights an important lesson for hydrogen deployment that increasing in supply alone is not enough. Demand must be cultivated deliberately and in parallel.

Taken together, these developments suggest that green hydrogen is entering its most fragile phase. It is no longer a speculative concept, but it is not yet a self-sustaining market. Technological progress continues, but without coordinated policy support and credible demand signals, those advances struggle to translate into commercial reality. Government involvement at this stage is less about grand ambition and more about consistency. Stable policy frameworks, targeted demand creation, and patient capital are now more important than ever.

Green hydrogen's challenge is not a lack of potential, but a lack of synchronization and early support, especially from governments. Until technology, demand, and investment move together, the sector risks remaining stuck between promise and scale, advancing just enough to prove its value, but not enough to transform the energy system it was meant to serve. Green hydrogen is a compliment to the current trend

of electrification, and therefore should not be neglected.

More on Clean Energy & Technology:

- **Japan**: Japan plans to provide 210 billion yen ($1.34 billion) in subsidies from fiscal 2026 to support companies that use 100% decarbonized electricity. The five-year scheme will cover up to half of eligible capital expenditure for firms. The policy comes as Japan struggles to accelerate wind and solar deployment amid rising offshore wind costs and local opposition to large solar projects. (*Reuters*, December 23)
- **France & China**: French President Emmanuel Macron noted during his trip to China that clean energy and energy-transition technologies are key areas of mutual benefit. He stressed that collaboration on clean energy between France and China could help address economic imbalances while advancing shared climate and industrial goals, even as the EU keeps defensive trade tools in reserve. (*Global Times*, December 17)
- **China**: China is rapidly scaling up carbon capture, utilization and storage (CCUS) in order to reach carbon neutrality before 2060. Integrated into national five-year plans and energy roadmaps, CCUS is being promoted as a bridge between energy security and climate goals. Scientists warn that China's carbon neutrality goal will be unreachable without CCUS given its energy demands. (*China Daily*, December 11)
- **The United States**: A U.S. federal judge has struck down President Donald Trump's executive order halting approvals of wind power projects on federal lands and waters, ruling that the blanket freeze was "arbitrary and capricious" and violated federal law. While the decision revives a legal pathway for stalled projects supporting state renewable targets and clean energy jobs, analysts note it does not force agencies to approve new wind farms. (*The New York Times*, December 9)
- **The United Kingdom**: Britain set a new wind power generation record with wind producing 23,825 megawatts of electricity. The output surpassed the previous record set in November and at its peak met nearly half of national electricity demand. (*Reuters*, December 8)
- **Poland**: Poland's power grid operator CEO Grzegorz Onichimowski suggests that Poland should focus on expanding cheaper onshore wind power rather than pushing ahead with costly offshore projects. He warns that heavy subsidies for offshore wind risk undermining the country's industrial competitiveness. (*Bloomberg*, December 3)
- **China**: China has connected the world's first commercial supercritical carbon dioxide (sCO_2) power generator to the grid, marking a milestone in next-generation clean energy technology. The system uses supercritical CO_2 instead of steam to convert industrial waste heat from steel production into electricity. (*South China Morning Post*, November 24)
- **The European Union**: The European Union pledged €7 billion to expand renewable-energy generation and electricity access in Africa under its Scaling Up Renewables in Africa campaign. The funding will be coordinated with electrification efforts led by the World Bank and the African Development Bank, targeting the nearly 600 million Africans who still lack access to electricity. (*Bloomberg*, November 21)
- **China**: China's National Energy Administration said it will expand renewable energy use beyond the power sector in the 2026–2030 period, focusing on green hydrogen, ammonia, methanol and sustainable aviation fuel to absorb surging wind and solar output. The plan encourages industrial parks and coastal regions to

use renewables. With industry consuming about 60% of electricity, regulators see cross-sector electrification as key to decarbonisation. (*Reuters*, November 12)

- **China**: China's largest wind turbine manufacturers are asking the government to accelerate its energy transition by installing at least 120 gigawatts of new wind power capacity annually over the next five years. If adopted, the proposal would more than double China's wind capacity by 2030. (*Bloomberg*, October 20)
- **Global**: Global sales of battery-electric and plug-in hybrid vehicles rose 26% year-on-year in September to a record 2.1 million units, driven primarily by strong demand in China and a temporary surge in the United States ahead of the expiration of federal EV tax credits. Nevertheless, analysts warn that U.S. demand is likely to soften in the fourth quarter as federal incentives lapse. (*Reuters*, October 15)
- **Brazil, Japan, Italy, and India**: The four countries are promoting a global "Belém 4X Pledge" ahead of COP30 that aims to quadruple sustainable fuel production by 2035 compared with 2024 levels. The initiative targets hard-to-decarbonize sectors such as aviation and heavy transport by scaling up biofuels, biogases, green hydrogen, and e-fuels, while allowing flexibility for countries' different starting points. Backers believe that a COP-backed political initiative could unlock up to $1.5 trillion in investment and millions of jobs for sustainable fuel. (*Bloomberg*, October 14)
- **The United Kingdom**: The UK has completed its first real-world test of blending green hydrogen into the national gas grid to generate electricity. A 2% hydrogen blend was injected into the live gas network and used to fuel the Brigg power station in North Lincolnshire, marking a milestone for hydrogen's role in decarbonizing parts of the energy system where alternatives are limited. (*The Guardian*, October 12)
- **China**: China's fast-growing EV market is driving rapid expansion in battery recycling, with companies achieving high recovery rates for lithium, nickel, cobalt, copper, and aluminum from spent EV batteries. Firms can now recover over 90% of materials and nearly 95% of lithium as lithium carbonate, cutting carbon emissions per unit by about 30% compared with conventional production. As battery retirements are expected to surge from 2026 onward, recycling is seen as a key pathway for reducing environmental impacts of EV batteries. (*China Daily*, October 9)
- **China**: China has brought online a world-first dual-tower solar thermal power plant in Gansu's Gobi Desert, using two towers feeding a single turbine to improve efficiency and cut costs. The design captures sunlight more effectively throughout the day, stores heat in molten salt, and can generate electricity after sunset, making it a complement to large-scale solar and wind power. (*South China Morning Post*, October 9)
- **Sweden:** Scientists from Japan, the UK, and Jordan won the Nobel Prize in Chemistry for developing metal–organic frameworks (MOFs): highly porous molecular structures with wide-ranging climate-related applications. These materials can capture carbon dioxide from factories and power plants, harvest water from desert air, and help manage hazardous gases in industrial processes. The breakthrough offers promising tools for reducing greenhouse gas emissions and addressing environmental pollution. (*Bloomberg*, October 8)

Climate Finance

Tropical Forest Forever Facility (TFFF) Aims to Turn Trees Into Assets

What is Happening

- Brazil positioned the Tropical Forest Forever Facility (TFFF), a proposed market-based fund designed to pay countries for keeping tropical forests standing, as a flagship initiative ahead of COP30 in Belém. Unlike traditional aid or donation, the TFFF aims to mobilize $25 billion in public seed capital and leverage up to $100 billion from private markets to invest in financial markets and use the returns to reward verified forest protection. Countries will receive a fee for every hectare of forest conserved. Brazil, Colombia, Indonesia and the Democratic Republic of Congo are expected to benefit most with the large forest coverage. President Luiz Inácio Lula da Silva announced a $1 billion Brazilian seed contribution. Brazilian officials and supporters also emphasized that political backing and early commitments from other countries matter more than immediately reaching the fund's capital target, framing the TFFF as a long-term, scalable solution to chronic underfunding of global forest conservation. (*Reccessary*, October 3) (*The Guardian*, November 6)

- The World Bank has confirmed it will act as trustee and interim secretariat for TFFF. Brazil praised that the World Bank's decision transforms the TFFF "from an idea into a fully operational reality". (*Climate Home News*, October 22)

- Brazil says strong political backing matters more than immediate funding commitments for launching the TFFF. Brazilian officials stress that no minimum financial threshold is required at the summit. Instead, the priority is sending a clear political signal from both donor and forest-rich countries that the TFFF is the chosen path forward for scaling forest finance. (*Climate Home News*, October 24)

- Brazil is lowering expectations for how much initial capital it can raise for the TFFF. Finance Minister Fernando Haddad stressed that early momentum and investor confidence matter more than hitting headline figures at launch. Indonesia has also pledged $1 billion after Brazil. Officials and financial executives emphasized that the TFFF should be viewed as a long-term, investment-driven mechanism that can mature into a commercially viable model for forest protection, even if early funding is modest. (*Bloomberg*, November 4)

- Norway and France have formally joined Brazil as investors, with Norway committing about $3 billion in repayable loans over 10 years. Germany's chancellor pledged a "significant" contribution in Belém, while Australia's Minderoo Foundation announced a $10 million philanthropic investment aimed at crowding in private capital. More than 50 countries have endorsed the TFFF declaration, and Brazil says talks are also ongoing with China, the Netherlands and the UAE. (*Bloomberg*, November 6)

- Britain's Prince William publicly endorsed TFFF at COP30, even as the UK government has declined to contribute financially to the fund. William highlighted the TFFF's emphasis on treating climate and nature together and urged stronger international partnership, framing the initiative as aligned with the goals of his Earthshot Prize. (*The Times*, November 6)

- UN Secretary-General António Guterres framed the TFFF as a critical climate intervention, warning that tropical forests are being treated as "short-term profit, not long-term value". He described the fund as

"a statement of solidarity and hope" and a "bold mechanism" to make standing forests more valuable than cleared land. (*UN News*, November 6)

- TFFF secured $6.7 billion in sponsor capital during COP30, significantly below the $25 billion target. While more than 50 countries endorsed the fund's launch, major Global North donors remained hesitant or attached conditions to their pledges, many of which cited domestic budget constraints. Brazilian officials insisted that the slow start would not delay the initiative. (*Mongabay*, November 24)

Why it Matters

The Tropical Forest Forever Facility (TFFF) represents one of the most structurally innovative responses yet to the long-standing dilemmas in climate finance. Unlike traditional approaches that reward carbon offsets or incentivize additional forest conservation, the TFFF proposes direct payments for maintaining existing tropical forests. Making standing forests, rather than quantified carbon credits, the object of investment. This shift could resolve two chronic flaws: countries that have long protected their forests often receive little to no compensation under current mechanisms, and carbon credits themselves face ongoing criticism for uncertain pricing and permanence risks of leakage. Therefore, the TFFF offers a form of institutional honesty: it pays as long as the forest stands, sidestepping the unverifiable future commitments and methodological disputes surrounding carbon sequestration.

TFFF breaks itself from status quo climate finance and points toward a broader reconceptualization of nature as a long-term, yield-generating asset class. Although there are already existing market-based investment fund structures, the political clarity and moral framing around forest value confined within national borders set TFFF apart. Thus, if the forest protection model succeeds, similar frameworks could be applied to other ecosystems, such as blue carbon and biodiversity projects. This is also the reason for Brazil and other sponsors to repeatedly emphasize the early political backing and multilateral recognition matter more than the upfront capital of TFFF.

However, the strategy is not without risks. Critics argue that shifting incentives from carbon to forests is simply repackaging an old structure with new labels. While this change openly admits the non-permanence of standing forests and avoids overpromising long-term sequestration, it also raises questions about whether markets will truly assign reliable long-term value to ecosystems like forests. Ultimately, TFFF is an experiment in turning nature into an investable asset—a test of whether capital markets are ready to price ecosystem integrity.

As the COP30 launch showed, it is clear that moral support remains easier than material commitment. Despite widespread political endorsements, actual sponsor capital reached only $6.7 billion, far short of the $25 billion target. Major donors from the Global North either delayed their pledges or imposed restrictive conditions. If the TFFF is to gain the momentum it seeks, it will need not only early political confidence but also sustained investment to prove that protecting nature—starting with forests—can be financially viable at scale.

More on Climate Finance:

- **Albania:** Albania is moving to close the gap between climate planning and implementation by launching a

national climate finance platform aimed at turning its National Adaptation Plan (NAP) and NDC priorities into a pipeline of bankable projects. The Albania Climate Finance Conference highlighted rising climate risks across South-East Europe and the urgency of mobilizing adaptation finance. (*UNESCO*, December 22)

- **The European Union:** The EU is moving into the implementation phase of its carbon border tax, the Carbon Border Adjustment Mechanism (CBAM), with full charges on embedded CO_2 emissions set to begin in January 2026. From that point, imports of steel, aluminium, cement, fertilisers and an expanded list of downstream products will face higher production costs unless they meet EU carbon standards. While the European Commission argues CBAM will curb carbon leakage and protect European industry, it also acknowledges cost pressures and plans to recycle around 25% of CBAM revenues in 2026–27 to help heavy industries decarbonise. (*Euronews*, December 17)

- **Global**: Norway, the U.K., the Netherlands and Germany governments along with philanthropies and donors have renewed the Forest and Land Tenure Pledge ahead of COP30, committing $1.8 billion for 2026–2030 to support Indigenous peoples and local communities in securing and managing their land. The renewed pledge increases the share of direct funding to these communities, responding to criticism that too much support previously flowed through intermediaries. (*Mongabay*, November 12)

- **Germany & Spain**: The Climate Investment Funds (CIF) announced $100 million in new funding from Germany and Spain to launch a program aimed at helping vulnerable countries adapt to climate change. (*Bloomberg*, November 10)

- **Global**: Ten multilateral development banks jointly pledged at COP30 to scale up climate finance for low- and middle-income countries, committing $185 billion by 2030 for adaptation and mitigation projects, including $120 billion from their own resources and $65 billion mobilized from private capital. (*Bloomberg*, November 10)

- **Global**: The Green Climate Fund approved a record $3.26 billion in climate financing this year, backing 22 new projects in developing countries and bringing its total portfolio to 338 projects worth $19.3 billion in GCF funds. Including co-financing, the fund has now mobilized $78.7 billion. (*Bloomberg*, October 30)

- **India**: India has urged that COP30 focus less on repeated reviews and more on closing the critical finance gap facing developing countries in climate adaptation and mitigation. Speaking at a pre-COP30 Global Stocktake (GST) session, Environment Minister Bhupender Yadav stressed that implementation and resource mobilization are now the central challenges under the Paris Agreement. The intervention reinforces India's position that future climate ambition hinges on credible financial support for developing economies. (*Business Standard*, October 14)

- **China**: Prices of China's carbon emission allowances have fallen to their lowest level in more than two years, driven by a sell-off that allows firms to sell surplus permits instead of letting them expire. China Emission Allowances have dropped nearly 40% this year amid persistent oversupply, weak demand, and policy adjustments. The price slump contrasts with more active carbon trading dynamics elsewhere in Asia-Pacific and Europe, showing that there are still challenges in balancing supply, demand, and regulatory design in China's carbon market. (*Bloomberg*, October 9)

- **The United States**:A large majority of World Bank executive directors publicly reaffirmed support for the institution's climate agenda, pushing back against U.S. pressure to scale it down. Nineteen of 25 directors

endorsed continued alignment with the Paris Agreement and the bank's pledge to allocate 45% of annual financing to climate-related projects. They also called for stronger support for coal transition, long-term climate-development planning, carbon markets, and expanded work on adaptation, resilience, pollution, and nature despite U.S. opposition. (*Reuters*, October 9)

- **China**: China's green bond market continued to expand strongly in 2025. Driven by supportive policy momentum, 356 green bonds were issued with a total value of RMB 6.48 trillion from January to August, up nearly 16% in number and 57% in value year-on-year. Cumulative issuance until August has already approached last year's full-year level. (*Global Times*, October 1)

Climate Risks and Adaptation

Typhoon Halong Hits Alaska, Proves No Country Is Immune to Climate Change

What is Happening

- The remnants of Typhoon Halong caused hurricane-force winds and severe flooding in western Alaska, forcing houses off their foundations in coastal villages including Kipnuk and Kwigillingok. Rescue aircraft and multiple state and federal agencies were deployed as homes floated away and residents were swept from buildings. At least dozens of people were rescued, while several remained unaccounted for as search-and-rescue operations continued under dangerous conditions. (*CBS News*, October 13)
- Forecasting for the deadly storm that struck western Alaska was likely compromised by gaps in weather balloon data following staffing cuts at the National Weather Service under the Trump administration. With reduced or missing balloon launches across western Alaska, critical atmospheric data was unavailable to feed forecast models, contributing to major errors in predicting the storm's track and intensity. Communities that ultimately experienced the worst flooding and storm surge were not initially identified as high risk. (*CNN*, October 14)
- After a devastating storm hit western Alaska, attention has turned to the Trump administration's cancellation of a $20 million EPA grant intended to protect the village of Kipnuk from river erosion. Awarded in late 2024 under the Biden administration, the grant was frozen and then canceled in 2025 as part of a broader rollback of climate-related funding. The project aimed to build an erosion barrier to protect homes and infrastructure increasingly threatened by riverbank collapse driven by erosion, permafrost loss and reduced sea ice. While the EPA argued the cancellation avoided wasting money because the barrier would not have been completed before the storm, critics and local leaders say the disaster underscores the long-term need for such adaptation investments. (*Alaska Public Media*, October 17)
- The devastation caused by the remnants of Typhoon Halong is largely fueled by climate change in the Arctic. Kipnuk and other villages in Alaska's Yukon–Kuskokwim Delta have been on the front lines of climate change for more than a decade. Rising temperatures have accelerated permafrost thaw, causing land subsidence that has steadily increased baseline flood risk in this low-lying Arctic region. Against this backdrop of chronic vulnerability, Typhoon Halong was intensified by unseasonably warm North Pacific waters as the storm approached Alaska, amplifying storm surge, rainfall, and winds. Climate change has also reduced sea ice that once buffered coastal communities from storm impacts, leaving tundra shorelines more exposed to erosion. Researchers concluded that Halong exhibited characteristics consistent with climate-driven changes in storm behavior, including heavier precipitation, hurricane-like winds, and higher waves, with the storm surge in Kipnuk breaking a 25-year-old record. (*Inside Climate News*, October 21) (*Alaska Beacon*, November 14)
- The devastation from Typhoon Halong has intensified long-standing climate risks facing Alaska Native villages in the Yukon–Kuskokwim Delta, where rising seas, coastal erosion, melting permafrost and stronger storms are steadily undermining the viability of permanent settlements.

Residents now face a structural dilemma shaped by climate change: whether repeated rebuilding in place remains viable, or whether costly and protracted relocation to higher ground is the only long-term adaptation pathway. (*The Guardian*, November 7)

- Scientists and advocates warn that warming-driven threats are making many communities increasingly unviable without major investments in protection or relocation. Reports showed that there is an estimated $80 million annual funding gap to address escalating climate risks in those regions. Yet fragmented federal programs, high local cost-sharing requirements and inconsistent political commitment have left many villages unable to act. (*Anchorage Daily News*, November 9)

Why it Matters

The devastation brought by Typhoon Halong serves as a stark warning of how climate change is no longer a distant threat but an immediate and compounding force reshaping the viability of entire communities. No country, no matter how wealthy or prepared, is immune to climate upheaval. In Alaska's Yukon–Kuskokwim Delta, rising seas, melting permafrost, and vanishing sea ice due to climate change have all converged to erode natural protections and amplify storm damage. Over time, these changes have steadily weakened the region's ability to withstand extreme weather, turning once-rare storms into existential threats. Typhoon Halong tore through communities with hurricane-force winds, lifting homes from their foundations and cutting off families as floodwaters surged inland. This disaster was intensified by climate changes: unseasonably warm North Pacific waters fueled the storm's energy, permafrost thaw lowered the land's elevation, and the loss of coastal sea ice left villages fully exposed to storm surge. The result is a grim new reality where entire settlements are now weighing the painful decision between rebuilding or retreat. These are not isolated natural disasters but symptoms of a system out of balance.

Yet the human impact of climate change is not just physical. The disaster exposed how political neglect can multiply the cost of environmental vulnerability. Budget cuts under the Trump administration gutted weather balloon launches and critical atmospheric monitoring, weakening the very forecasting tools that could have warned these communities in time. The cancellation of a $20 million EPA climate adaptation grant for Kipnuk—justified on the grounds that the barrier wouldn't be finished before the storm—betrays a lack of long-term commitment. If short-term timelines always override adaptation needs, how can communities ever be protected before the next storm hits? The result is a grim feedback loop: insufficient early warning, insufficient protection, and now a looming need for relocation, effectively turning American citizens into internal climate refugees.

The case of Kipnuk and its neighbors should serve as a wake-up call. It reminds us that environmental protection is not a luxury but a form of economic prudence. Had the erosion barrier been built, the cost of emergency rescue, rebuilding, and human suffering might have been far lower. If even a wealthy and resourceful country like the United States can leave its own people so exposed, what does this say for the many developing nations confronting similar threats without comparable capacity?

In that light, the U.S. emergency response to Halong—though rapid and commendable—should not be mistaken as a substitute for resilience. While disaster response saved lives, the deeper lesson is clear: prevention is not only more humane, but more cost-effective. Without it, we risk a future where global climate instability produces more Kipnuks, more displacement, and more communities forced into impossible choices. That's a future no country can afford.

More on Climate Risks and Adaptation:

- **The Arctic**: The Arctic experienced its hottest year on record from October 2024 to September 2025, alongside the lowest maximum sea ice extent ever observed. NOAA found the Arctic is now warming up to four times faster than the global average, with record precipitation increasingly falling as rain rather than snow, accelerating ice loss and redefining seasonal patterns. Scientists warn these shifts are triggering cascading global impacts far beyond the Arctic itself. (*The Guardian*, December 16)
- **Colombia**: Colombia has approved landmark legislation recognizing people displaced by climate change as formal victims with rights, becoming the first country in Latin America to do so. The new law means those forced from their homes by floods, landslides, volcanic eruptions and other climate-related disasters will no longer be treated as temporary emergency cases, but as victims entitled to comprehensive, continuous and preventive state support. (*El Espectador*, December 16)
- **Southeast Asia**: Devastating floods across South and Southeast Asia have killed more than 1,300 people and caused at least $20 billion in losses since late last month as the regions become increasingly exposed to climate-driven extreme weather. Scientists link the destruction to a combination of climate change–intensified rainfall, overlapping tropical cyclones and monsoon systems, and structural vulnerabilities such as deforestation, weak flood defenses and underinvestment in resilience. (*Bloomberg*, December 4)
- **The European Union**: The European Union is launching a new attribution service under Copernicus Climate Change Service to rapidly assess how climate change is influencing extreme weather events. Scientists say the initiative could strengthen climate policymaking, improve financial and insurance risk assessments, and provide more robust evidence for climate litigation by identifying the links between greenhouse gas emissions and climate-fuelled disasters. (*Reuters*, November 20)
- **Iceland**: Iceland has formally designated the potential collapse of the Atlantic Meridional Overturning Circulation (AMOC) as a national security and existential threat. Iceland's climate minister said accelerating Arctic ice melt and freshwater inflows from Greenland could disrupt the ocean current that moderates Northern Europe's climate, potentially causing extreme cold, food insecurity, and many more disruptions. (*Reuters*, November 12)
- **Jamaica**: Analysis found that climate change significantly intensified Hurricane Melissa, making it the most powerful storm ever to strike Jamaica. Global warming made Melissa's extreme winds five times more likely and about 7% stronger, and rainfall over Jamaica was roughly 30% heavier and twice as likely than in a world without human-caused warming. (*Bloomberg*, November 6)
- **The United States**: Billionaire investor and philanthropist Bill Gates urged world leaders to prioritize climate adaptation and human development over focusing on temperature reduction. Gates argued that resilience should be built through investments in health systems, energy access, agriculture, and infrastructure, particularly in vulnerable regions. He emphasized that improved warning systems and resilience have already reduced disaster-related deaths dramatically over the past century. (*Reuters*, October 28)
- **The Philippines**: Nearly 70 survivors of Super Typhoon Odette (Rai), which killed more than 400 people in

the Philippines in 2021, have formally notified energy giant Shell that they are seeking compensation for deaths and damages they argue were intensified by climate change driven in part by the company's historical carbon emissions. Shell rejects legal liability, saying it is transitioning toward lower-carbon energy and disputing claims of unique prior knowledge about climate risks. (*AP News*, October 23)

- **Global**: Atmospheric carbon dioxide concentrations rose by a record amount last year, reaching levels unseen in at least 800,000 years, according to the World Meteorological Organization. Due to fossil fuel combustion and wildfires, the annual increase from 2023 to 2024 was the largest since measurements began in 1957. Scientists warn this surge suggests growing strain on the planet's natural carbon sinks, as oceans and forests are losing their capacity to absorb emissions. (*AP News*, October 15)
- **Denmark**: Danish multinational energy company Ørsted announced plans to cut about 25% of its global workforce by the end of 2027, reducing headcount by roughly 2,000 employees. The move follows political pressure on wind energy in the U.S., including halted projects and policy uncertainty under the Trump administration, as well as a weaker-than-expected offshore wind market. (*CNBC*, October 9)
- **Global**: New Copernicus Climate Change Service data show that September 2025 was the third-warmest September on record globally, with average surface air temperatures 0.66°C above the 1991–2020 baseline. Both land and sea temperatures remained persistently high as a result of the continued influence of human-driven greenhouse gas accumulation. Rising ocean temperatures and decreasing sea ice will exacerbate the ongoing risks to sea levels, ecosystems, and extreme weather patterns. (*Euronews*, October 9)
- **The United Kingdom:** UK officials blocked the publication of a report warning that the collapse of tropical rainforests could raise food prices in Britain and fuel global instability, citing concerns it was "too negative." The assessment linked ecosystem degradation to higher supermarket costs, conflict risks, and migration pressures, and raised questions about the UK's commitments ahead of COP30. (*The Times*, October 8)

BCCC Commentary of the Quarter

Africa Misread the Just Energy Transition at COP30

By Zhangchen Wang
December 12, 2025

At COP30 in Belém, African negotiators chose to stand apart from one of the summit's most consequential debates. Under Tanzania's leadership, the African Group of Negotiators aligned themselves with major oil-producing countries and urged ministers to oppose the inclusion of any language on "transitioning away from fossil fuels" in the conference outcome, framing such a roadmap as a threat to Africa's development prospects. Their position ultimately contributed to a week-long standoff that ended with fossil fuels being excluded entirely from the final Global Mutirão decision. African countries' stance may reflect a deep concern over defending their sovereignty, but it was strategically miscalculated to put it in a forceful way. By refusing to engage altogether, African governments blurred the distinction between a just energy transition and the absence of any transition at all. This position inevitably weakens their ability to secure climate finance and technology for what has long been presented as a dual-track strategy: developing fossil resources while simultaneously expanding renewable energy. It also overlooks the deeper structural reality that a fossil-dependent development model cannot, in the twenty-first century, meet the economic and energy security needs of any country—nor shield it from the substantial environmental and fiscal costs that inevitably follow.[1]

Much of the African rhetoric treated "just transition" as synonymous with external pressure to shut down oil and gas before these resources have had any chance to support domestic development. Officials frequently pointed to the reality that hundreds of millions of households still lack access to cooking fuels, and that expanding electricity and energy supply that primarily relies on fossil fuels is essential for industrial growth in Africa. A number of African states possess natural gas, oil and, and to a lesser extent, coal, and many of these deposits remain largely undeveloped. Thus, fossil fuels were presented as the most

[1] Image: Activists perform the death of fossil fuels on the sidelines of the COP30 UN Climate Change Conference. (Photo by PABLO PORCIUNCULA/AFP via Getty Images)

immediate, economical and realistic option for meeting basic energy needs while driving economic expansion. In fact, this line of reasoning closely resembles the "pollute first, improve later" development model associated with China's early reform era—a strategy that prioritized rapid economic expansion through cheap fossil energy, accepted climate and environmental damage as an interim cost, and assumed that future prosperity would fund eventual remediation. Both Britain's mid-nineteenth-century coal-driven industrialization and China's energy-intensive industrial expansion during the reform era were emblematic of this trajectory, and actually much of today's industrialized world followed some version of this path as it developed. However, those paths unfolded under conditions profoundly different from today's. It was a world with limited understanding of climate risks, few affordable clean energy options, weak global climate governance, and virtually no recognition of carbon as an economic and social liability.

The "pollute first, improve later" development model imposes immense costs including severe climate damage, air pollution, and heavy fiscal burdens for environmental recovery. Replicating such a pathway in the twenty-first century would mean repeating the damage without the historical justifications because the structural, technological and policy conditions that shaped earlier industrialisation have fundamentally changed today. Clean energy is becoming more affordable and accessible, the scientific and political understanding of climate risks has progressed to the point where the long-term negative consequences of fossil-heavy development are widely recognized, and there is also a tendency of increasing penalties on carbon emission through trade.

Another deeper structural problem is that a fossil-heavy development strategy is also unlikely to succeed on its own terms even before considering the accelerating global shift toward clean energy. Africa is home to nearly one-fifth of the world's population, yet it holds only about 10 percent of global oil and gas reserves, and these are concentrated in just a handful of countries. These resources are already central to fiscal revenues and exports. They are far too limited, both in volume and distribution, to sustain the long-term domestic growth once economic development accelerates and energy demand rises.

This creates a double trap for any fossil fuel driven pathway. If economies grow quickly, domestic energy demand will outstrip what fossil resources can reliably and affordably supply, forcing increased imports and exposing African countries to volatile international prices and geopolitical shocks. If growth falters, African societies will bear the environmental and health damage associated with high fossil use without generating the fiscal capacity required for large-scale clean-up or adaptation. In both scenarios, the continent is left more vulnerable. Renewable energy and modern grids are therefore the only realistic way to build the scale, resilience, and diversity of supply that a prosperous Africa will require.

This vulnerability is further compounded by the fiscal and political dependence that prolonged reliance on fossil revenues can create. Many African economies derive a substantial share of government revenue and export earnings from fossil fuels. Over half of African states depend on oil, gas, or minerals for at least 60 percent of export earnings, and the fiscal dependence helps explain why energy transition attempts are dragged by immediate budgetary and political concerns rather than long-term planning. Yet it is also

precisely this dependence that underscores the need for diversification, because prolonged reliance on resource rents risks reinforcing the well-documented "resource curse", making development unsustainable both economically and climatically for Africa.

African countries also risk losing access to the very financial and political influence they will need if they disengage from the transition altogether. Climate finance is explicitly intended to support developing countries, and African states have already benefited from it in meaningful ways. South Africa's Just Energy Transition Investment Plan (JET-IP), for instance, unlocked an initial funding package of $8.5 billion, with additional commitments continuing to grow. International organizations such as the World Bank have also advanced off-grid solar deployment in under-electrified regions through programs like the Kenya Off-Grid Solar Access Project. Resources do flow when countries present credible plans, but without engagement in shaping the emerging global transition roadmap, many African governments will struggle to secure the concessional finance needed to scale their energy systems as demand rises.

The political costs are just as significant. Whether or not African governments engage, a global fossil-fuel transition is already underway, and the rules that emerge will affect the continent directly and indirectly for decades to come. By failing to participate and make their voices heard on the future of global energy, African negotiators weakened their ability to shape a framework that will apply to them whether or not they formally consent. African countries could instead adopt a strategy of conditional engagement that supports a roadmap in principle and sets out clear transition timelines, energy-access guarantees, and protections for oil- and gas-dependent economies. Such an approach would allow African states to become rule-makers who design frameworks suited to their own development realities, which only they are in a position to define. However, the continent entered the negotiations with a posture of rejection, leaving its core priorities—energy access, exposure to market volatility, and the fiscal vulnerability of fossil-dependent states—absent from the emerging process.

A dual-track strategy that develops both renewable energy and fossil fuels while steadily increasing the weight of clean energy offers a more cost-competitive and practical pathway for Africa. Solar and wind electricity generation is already among the lowest-cost options for new power supply, and mini-grids and distributed systems can electrify remote communities without the expensive transmission infrastructure required by conventional grids. Unlike oil or gas, renewable energy is also largely insulated from global fuel price volatility that has repeatedly destabilized African economies. Clean energy is therefore no longer an environmental luxury but a practical development tool for today's emerging economies. In this sense, a just transition does not require fossil resources to disappear or even decline; it requires that clean energy expand rapidly alongside them and gradually account for a larger share of the continent's growing energy system, allowing Africa to pursue development without inheriting the long-term economic risks associated with a fossil-heavy system.

Africa's concerns about development are real, and its right to shape its own energy future is unquestionable. Nevertheless, disengaging from the just transition debate does not protect that future. A strategy of

conditional engagement, paired with a dual-track energy system that expands clean energy alongside fossil resources, would give African states not only access to climate finance but also a role in shaping the rules of a world that is already moving away from carbon. A just transition will not be a constraint on African development but a mechanism to secure it: a framework that links growth with resilience, sovereignty with sustainability, and short-term needs with long-term stability. This is precisely for this reason that Africa's interests are not advanced by aligning with fossil-fuel exporters to resist transition frameworks. By choosing to participate rather than resist, African countries can turn the energy transition from a perceived threat into an instrument of economic empowerment crafted on their own terms.

This season's BCCC Commentary of the Quarter was researched and written by Zhangchen Wang, Research Associate at the Institute for China-America Studies.

Climate Change Project Profile: 2025 United Nations Climate Change Conference (COP30)

A. Understanding 2025 United Nations Climate Change Conference (COP30)

The 2025 United Nations Climate Change Conference (COP30), held in Belém, Brazil, unfolded amid intensifying climate impacts and growing pressure on the international system to move from pledges to delivery. While the conference produced a range of institutional and procedural outcomes, it also underscored how much of the global climate agenda remains stalled at the level of political commitment rather than implementation. Many of COP30's headline advances took the form of new frameworks, processes and dialogues, reflecting both incremental progress and the persistent inability of governments to mobilize sufficient finance or agree on contentious issues such as fossil-fuel transition. [2]

COP30 did register concrete movement in areas including adaptation governance, loss and damage, and the formal integration of trade considerations into the climate framework. Yet these outcomes also revealed the limits of the current approach: adaptation systems that depend on non-binding finance pledges, loss-and-damage mechanisms that remain under-resourced, and an expanding reliance on informal or cross-institutional processes to compensate for deadlock in formal negotiations. Taken together, the results of COP30 highlight the central challenges facing the next phase of global climate governance—how to translate institutional architecture into real-world delivery, how to confront entrenched political resistance

[2] Image: The group photo of the COP30 Climate Summit. (Lula Oficial Photo by Ricardo Stuckert via Flickr, CC BY-SA 4.0)

around fossil fuels, and how to clarify leadership and accountability in an increasingly complex and multi-actor climate regime.

B. What Happened at COP30

The Global Mutirão

During COP30, 119 countries representing roughly three-quarters of global emissions submitted new or updated Nationally Determined Contributions (NDCs). While these plans collectively strengthened global mitigation efforts, they still fall far short of what is required to align global emissions with a 1.5°C pathway by 2035. In response to this ambition gap, Brazil as the COP30 Presidency introduced the Global Mutirão. The decision reaffirms the Paris temperature goals and, for the first time, explicitly acknowledges that the world is likely to overshoot 1.5°C. It also stresses the need to limit both the magnitude and the duration of that overshoot through accelerated action this decade. Because several countries opposed embedding a formal energy-transition roadmap in the UNFCCC decisions, parties instead endorsed two voluntary presidency-led initiatives — the Global Implementation Accelerator and the Belém Mission to 1.5 — designed to support faster delivery of NDCs and adaptation plans and to help keep 1.5°C "within reach." Brazil also announced that it will convene separate processes outside the formal negotiating track to advance global roadmaps on transitioning away from fossil fuels and reducing deforestation.

Adaptation and Climate Finance

For the first time in history, countries agreed on a set of 59 indicators under the Global Goal on Adaptation (GGA), covering sectors such as water, agriculture, health and infrastructure, as well as cross-cutting areas like finance, capacity building, and technology transfer. In fact, the negotiated list was not the original proposal but a narrowed down subset from an earlier draft of about 100 indicators after a contentious process. As a result, COP30 also established a two-year "Belém–Addis vision" process to refine, test and potentially revise the indicators before full implementation begins.

Even as the GGA framework advances, it remains uncertain whether countries can meaningfully achieve these goals without a far stronger commitment to adaptation finance, which has stayed at chronically low levels for years. Negotiators therefore also agreed to at least triple adaptation finance by 2035 for developing countries. This is framed as a successor to the Glasgow pledge to double adaptation finance by 2025, and implies that a substantial share (often cited around US$120 billion per year) of the broader climate-finance goal should flow into resilience and adaptation by the mid-2030s. COP30 also advanced the implementation of the Baku-to-Belém Roadmap to US$1.3 trillion, a plan presented by the COP29 and COP30 presidencies that sketches how different actors — governments, MDBs, private finance and "country platforms" — could collectively mobilize US$1.3 trillion per year in climate finance for developing countries by 2035. Despite these broad frameworks, COP30 did not produce comparable new commitments for mitigation or clean-energy finance, and no major new funding or investment pledges were made to support renewable energy deployment or industrial decarbonization.

Loss and Damage Fund

Loss and damage did not receive the same level of political spotlight at COP30 as in the previous two conferences, but the summit nonetheless delivered meaningful steps in consolidating the architecture. COP30 adopted new operational guidance for the Fund for Responding to Loss and Damage (FRLD), detailing procedures for how countries may request support and how the Fund should prioritize vulnerable developing countries. COP30 also launched the FRLD's first call for funding requests under the Barbados Implementation Modalities, enabling developing countries to begin accessing an initial tranche of grant finance.

Trade and Climate Governance

For the first time in history, COP30 explicitly recognized trade policy as a component of global climate governance. This shift followed calls from a group of developing countries for the UNFCCC to formally address the growing use of unilateral climate-related trade measures, such as carbon border adjustments and product-level emissions standards. In response, the Global Mutirão decision mandates a structured series of dialogues on trade and climate over the next three years, with participation from the WTO and other relevant institutions. These dialogues will create new spaces to examine how climate policies adopted by major economies affect developing countries, market access, and the competitiveness of industries with differing carbon intensities. Nevertheless, the decision stops short of prescribing reforms to existing trade instruments or establishing any constraints on countries' use of such measures. It remains a forum for assessment and dialogue rather than a venue for negotiating binding trade rules.

Nature and Forests

Despite being the first COP held in the Amazon, negotiators once again failed to agree on a global roadmap to end deforestation, largely due to opposition from several major commodity-producing countries, including Indonesia, Malaysia and others that expressed concerns about the implications of a uniform global timeline. Regardless, COP30 delivered a series of nature-related outcomes. Brazil formally launched the Tropical Forests Forever Facility, designed to provide long-term, predictable funding to countries that keep tropical forests standing, with an initial pledge of about US$6.7 billion from a group including Brazil, Indonesia, Germany, France and Norway, against a longer-term target of US$25 billion in public funds and US$100 billion from private sources. Countries also renewed and expanded the Forest and Land Tenure Pledge, committing US$1.8 billion through 2030 and broadening the focus beyond forests to other ecosystems such as savannas and mangroves.

C. How COP30 is Making a Difference

The First Adaptation Measurement System

COP30 delivered substantive progress on adaptation by adopting 59 indicators under the Global Goal on Adaptation. This is the first structured and measurable system for tracking global adaptation efforts in history. Unlike past narrative-based reporting, the new framework introduces a common measurement language that enables more consistent assessment across countries and sectors. Its scope is unusually comprehensive: the indicators span water, agriculture, health, infrastructure and ecosystems, while also integrating cross-cutting dimensions such as finance, capacity building, technology transfer, gender considerations and Indigenous rights. This combination of sectoral and systemic metrics offers a more holistic picture of national resilience than any previous UNFCCC instrument. Additionally, countries are allowed to test, refine and revise the indicators before full operationalization, enabling the new system to accommodate differing national capacities and avoid locking the world into rigid metrics that may prove unworkable to some countries, especially developing countries.

Trade Becomes a Formal Part of Climate Governance for the First Time

One of COP30's most significant institutional shifts was the explicit recognition of trade policy within the UNFCCC framework as well as the establishment of a mandated dialogue on trade and climate policies involving the WTO. This is a notable development because many major economies are continuously expanding their carbon border adjustments, supply-chain emission requirements, and green industrial subsidies, all of which carry substantial implications for market access under the WTO framework and for the trade competitiveness of exporters, particularly in developing countries. Until now, climate-related trade measures had largely evolved without any international forum dedicated to assessing their systemic impacts, leaving countries to navigate emerging carbon standards and border policies in an ad hoc and often inequitable manner. The new dialogue process begins to fill that gap by creating a multilateral space to examine how to reduce carbon leakage risks while safeguarding open, rules-based trade. It also offers a venue to help prevent unilateral climate measures from being used as de facto protectionist tools—an ongoing concern among developing economies that fear carbon policies could evolve into new barriers to market access. Although the mechanism does not carry legal authority over national trade instruments, its establishment signals an important institutional recognition that climate ambition and global trade governance are now mutually shaping policy domains that require coordinated governance.

Loss and Damage Moves Incrementally Toward Operation

The FRLD's initial operationalization through the Barbados Implementation Modalities marks a practical shift toward functionality, with grant finance available through direct budget support and a Board tasked with designing rapid-disbursement tools, small-grant mechanisms and a replenishment process from 2027. These steps collectively make the loss-and-damage system more coherent and more capable of responding to real-world impacts. Yet the architecture faces a critical constraint: without substantially increased and predictable financial contributions, the system's improved institutional readiness will not translate into support at a scale commensurate with rising climate-induced losses.

D. What's Next for COP

COP30 exposed several structural challenges that future climate negotiations must confront. The most immediate gap lies in climate finance. While COP30 broadened the conceptual architecture of finance through the Baku-to-Belém Roadmap, the summit did not deliver significant new resources, particularly for clean-energy deployment and mitigation, where investment gaps remain the widest. The commitments made at Belém remain at the level of vision, lacking concrete obligations, a framework of shared responsibility, and especially a credible mechanism for mobilizing private capital. The credibility of future COPs will increasingly depend not on new financial narratives but on whether countries can translate long-term visions into actual financial flows.

A second area demanding future attention is the global transition away from fossil fuels. COP30 once again revealed deep political resistance among major producers, whose coordinated opposition prevented any reference to transitioning away from oil and gas from appearing in the formal outcome text. Although the conference agreed to initiate a process on just transition, its mandate remains limited to social protection and knowledge-sharing rather than addressing the pace or direction of energy system change. Frankly speaking, COP30 made no progress toward a collective understanding of how fossil-fuel production and consumption must evolve to align with the Paris temperature goals, and future negotiations will need to confront this unresolved tension more directly.

COP30 also revealed the growing fragmentation of global climate governance. The growing involvement of institutions such as the WTO, multilateral development banks and other sector-specific bodies should not be seen as fragmentation in a negative sense; on the contrary, effective climate action will inevitably require cooperation across trade, finance, industry and development governance systems. However, as political compromises constrain formal negotiations, a widening range of Presidency-led initiatives and informal platforms are taking on responsibilities that the UNFCCC process has struggled to manage. This shift blurs the boundaries of authority within the climate regime. It also raises deeper questions about institutional ownership—which body ultimately defines the rules and accountability structures for global climate action? Future COPs will need to clarify roles across institutions to ensure a coherent and legitimate multilateral climate regime.

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This season's Climate Change Project Profile on 2025 United Nations Climate Change Conference (COP30) was primarily researched and written by Zhangchen Wang, Research Associate at the Institute for China-America Studies.

Climate Change Actor Profile: IMO Net-Zero Framework

A. Understanding IMO Net-Zero Framework

The International Maritime Organization (IMO) Net-Zero Framework (the Framework) is a global first, legally binding regulatory framework adopted by the International Maritime Organization to reduce greenhouse-gas emissions from international shipping by regulating the life-cycle GHG intensity of marine fuels and introducing a global, sector-wide economic mechanism. Embedded in Chapter 5 of the revised MARPOL Annex VI, the Framework establishes mandatory compliance obligations for ships engaged in international voyages, marking the first attempt to operationalize the IMO's net-zero ambition through enforceable global rules.[3]

The IMO Net-Zero Framework reflects deeper political, economic, and governance debates surrounding maritime decarbonization. The Net-Zero Framework illustrates how international climate ambition is translated into concrete regulatory instruments, how market incentives are reshaped through global rules, and how geopolitical tensions influence both the pace and direction of climate action in shipping. Together, these dynamics help explain why the Framework has generated strong support from some stakeholders, resistance from others, and why its future trajectory will be decisive for the sector's transition toward

[3] Image: Opening of the IMO Marine Environment Protection Committee (MEPC) 2nd extraordinary session, 14-17 October, 2025. (by International Maritime Organization via Flickr,CC BY-SA 4.0)

net-zero emissions.

B. What is IMO Net-Zero Framework

International Maritime Organization

The International Maritime Organization (IMO) is the specialized agency of the United Nations responsible for setting global standards for the safety, security, and environmental performance of international shipping. The IMO creates binding international rules covering ship design, vessel operations, marine pollution prevention, and air emissions, with the goal of ensuring that maritime transport functions safely and sustainably across all oceans. Its regulatory scope includes the prevention of pollution from ships, adoption of international safety codes, and development of measures to address climate change impacts from the shipping sector.

Since the late 1990s, IMO has gradually expanded its work on air emissions and greenhouse gases. Its early efforts focused on energy-efficiency rules under The International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI, culminating in mandatory requirements such as the Energy Efficiency Design Index (EEDI) for new ships and the Ship Energy Efficiency Management Plan (SEEMP) for all ships. These measures laid the groundwork for today's GHG policy architecture.

Initial IMO Strategy on Reduction of GHG Emissions from Ships

In 2018, IMO adopted its first comprehensive climate strategy, the Initial IMO Strategy on Reduction of GHG Emissions from Ships, marking the organization's formal alignment with the objectives of the Paris Agreement. The Initial Strategy recognized IMO as the competent international body for regulating shipping emissions and set the vision of phasing them out "as soon as possible in this century".
The 2018 Strategy committed Member States to a series of sector-wide goals, including:

- reducing carbon intensity of international shipping by at least 40% by 2030,
- pursuing efforts toward 70% by 2050, and
- reducing total annual GHG emissions by at least 50% by 2050, with efforts toward full decarbonization.

These ambitions reflected early consensus but required further development of concrete regulatory measures, which IMO continued to refine through the early 2020s.

2023 IMO Strategy on Reduction of GHG Emissions from Ships

In 2023, IMO adopted and revised a more ambitious climate strategy based on the 2018 Initial Strategy.
The 2023 IMO GHG Strategy strengthened the sector's long-term pathway by:

- committing to net-zero GHG emissions from international shipping by or around 2050,
- introducing 2030 and 2040 indicative checkpoints for total GHG reductions (20–30% by 2030, 70–80% by 2040), and
- emphasizing the need for global uptake of zero- or near-zero emission fuels.

The 2023 Strategy explicitly recognized that technological innovation, the development of alternative fuels, and supportive policies would be essential. It also acknowledged differentiated impacts on developing countries, in particular least developed countries (LDCs) and small island developing States (SIDS). The Strategy called for IMO to adopt a "basket of mid-term measures" by 2025, combining a mandatory GHG-fuel standard and an economic element—directly paving the way for creation of the IMO Net-Zero Framework.

IMO Net-zero Framework

In April 2025, IMO's Marine Environment Protection Committee (MEPC 83) approved the IMO Net-Zero Framework to achieve the emission target listed in the 2023 Strategy for international shipping. The Framework was operationalized through a new Chapter 5 in the draft revised MARPOL Annex VI. The Framework establishes a climate regime focused on regulating the life-cycle GHG intensity of marine fuels and introducing a sector-wide emissions pricing mechanism.

The Framework applies to all ships of 400 gross tonnage and above, regardless of flag, consistent with IMO's non-discrimination principles. Ships operators must calculate the attained annual GHG fuel intensity (GFI) of the ships based on the life-cycle (well-to-wake) GHG emissions per unit of energy used, and compare it to a declining target GFI set by IMO. This fuel-intensity standard directly links compliance to the type and carbon intensity of fuels used, accelerating the shift away from fossil fuels. If a ship exceeds the GFI target, it will incur a GFI compliance deficit that must be compensated by using Surplus Units (SUs) earned by better-performing ships, or purchasing Remedial Units (RUs) through contributions to the IMO Net-Zero Fund. Every ship must maintain a ship account in the IMO GFI Registry, which records fuel-intensity results, unit transfers, and annual compliance outcomes. Verified data is uploaded by administrations after review. The Framework was originally scheduled for formal adoption in October 2025, and entry into force in 2027, following MARPOL amendment procedures. However, the adoption of the Framework faced opposition from MARPOL member states and was delayed for one year.

Net-zero Fund

The Net Zero Framework also establishes the Net Zero Fund. The Fund receives, manages, and disburses revenues generated through the emissions pricing mechanism (via the purchase of RUs) to serve multiple climate and equity objectives, including:

- Rewarding low-emission ships, based on avoided GHG emissions;
- Financing innovation, research, and infrastructure to accelerate uptake of zero- and near-zero emission fuels;
- Supporting just transition initiatives in developing countries, including Least Developed Countries (LDCs) and small island developing states (SIDS);
- Funding training, technology transfer, and capacity-building for implementation of IMO's GHG strategy;
- Mitigating negative impacts on vulnerable States, recognizing specific maritime-trade dependencies.

A governing board will oversee the Fund's operations, reporting back to IMO's MEPC on performance and use of funds.

C. How IMO Net-Zero Framework is Making a Difference

The First of Its Kind Globally

The IMO Net-Zero Framework is the first global, legally binding mechanism designed to address and reduce greenhouse-gas emissions from the maritime sector. Before this framework, carbon pricing for shipping existed only at the regional level, most prominently through the EU Emissions Trading System (EU ETS) extension to maritime transport beginning in 2024. The EU ETS, however, applies only to voyages touching EU ports and generates region-specific incentives. By contrast, the IMO Framework creates a universally applicable regime, moving the sector from a patchwork of regional rules toward a coherent worldwide decarbonization architecture.

Legal Enforceability

A defining strength of the IMO Net-Zero Framework lies in its legal enforceability and limited scope for regulatory arbitrage. Under MARPOL Annex VI, any ship flying the flag of a State that has ratified the Convention is subject to mandatory compliance obligations, while ships calling at ports of ratifying States are equally subject to port State control. This dual enforcement structure ensures that vessels cannot evade the Framework by exploiting jurisdictional gaps: so long as a ship operates under a flag State party to MARPOL or engages in trade involving ports of such States, it falls within the IMO's enforcement network. It ensures that all ships face a unified GHG incentive regardless of flag, trade route, or market exposure. Authority under the Framework is exercised through a layered governance model in which the IMO establishes binding rules, flag states bear primary responsibility for implementation and certification, and port states provide an additional compliance backstop through inspections and potential detention.

Facilitate the Shift towards a Greener Maritime Sector

The Framework reshapes the economics of marine fuels by imposing financial disincentives on ships with high GHG fuel intensity while offering economic incentives to ships that adopt cleaner fuels and technologies. The mechanism creates a transparent price signal that rewards early adopters of low-and zero-emission fuels because it requires deficits to be compensated through Surplus Units or Remedial Units. The Framework ensures that revenue generated from the pricing mechanism remains within the maritime sector, rather than flowing to general government budgets, thereby channeling capital directly into fuel innovation, infrastructure development, and technology deployment.

A Step Beyond Offset-Based Systems

Another global climate mechanism in the transportation sector is the Carbon Offsetting and Reduction

Scheme for International Aviation (CORSIA) to address greenhouse-gas emissions from international aviation. CORSIA is adopted under the International Civil Aviation Organization (ICAO). Rather than regulating fuel use or emissions at source, CORSIA requires airlines to offset emissions above a set baseline by purchasing carbon credits generated in other sectors, such as forestry or renewable energy projects.

Unlike the offsetting logic used by CORSIA, the IMO Net-Zero Framework creates in-sector climate incentives. Revenue generated from the Framework remains within the maritime sector instead of external offset markets, meaning funds are used to directly lower emissions in shipping rather than compensating for them elsewhere. This difference is material: offsetting risks the continued use of fossil-fuel if credits are purchased; whereas the IMO Framework actively invests the money on investment pathways within the maritime sector such as the R&D of fuel mix and technology.

The Net-Zero Framework as the Core of the 2023 IMO Strategy

If adopted according to the planned timeline, the Net-Zero Framework will become the central regulatory pillar supporting the emission targets set in the 2023 IMO Strategy. By linking fuel GHG intensity, unit trading, and a dedicated Net-Zero Fund, the Framework introduces a comprehensive toolbox of both incentives and disincentives for compliance for achieving sectoral decarbonization. Its global scope, financial structure, and direct link to fuel choices make it a transformative step toward aligning international shipping with international climate goals.

D. The Latest on IMO Net-Zero Framework and What it Means

The Trump Administration Threatened Retaliation against Passing the Net-Zero Framework

The Trump administration in August issued a joint statement from four cabinet secretaries “unequivocally rejecting” the IMO’s proposed net-zero framework, warning it would raise costs for Americans and threatening retaliation against countries that support the plan at the October MEPC meeting. The statement framed the framework as a “global carbon tax” that disadvantages U.S. shipping and LNG producers while benefiting China’s emerging alternative-fuel industry. Coming after the U.S. walked out of an earlier IMO vote, the threat of tariffs or other reprisals heightens uncertainty for October negotiations and further complicates efforts to advance global maritime decarbonization rules.

The U.S. opposition represents a significant setback for international climate governance in the shipping sector. As one of the world’s largest producers and exporters of LNG and a major maritime trading nation, U.S. resistance is not only selfish, but undermines momentum toward a global decarbonization framework and introduces geopolitical pressure into an already delicate negotiating process. By framing the Framework as a “global carbon tax,” the U.S. mischaracterizes the proposal, which is structured as a fuel-intensity standard paired with an in-sector economic mechanism, not a tax collected by governments.

The episode signals a broader U.S. retreat from multilateral climate coordination and reflects domestic

political priorities that favor fossil-fuel export competitiveness over long-term decarbonization. It also highlights a double standard: while the U.S. frequently imposes unilateral trade measures such as tariffs on strategic imports, it rejects even a globally administered sectoral mechanism that reinvests revenues back into maritime innovation. The threat of retaliation may deter some states from supporting the Framework, thereby delaying or weakening global decarbonization efforts at a moment when alignment is critical for meeting the 2023 IMO Strategy's targets.

The Net-Zero Framework Received Support from Green Fuel Producers

More than 20 green fuel producers urged IMO delegates to adopt the Net-Zero Framework prior to the adoption voting, warning in an open letter that the current draft fails to provide strong investment signals for scalable zero-emission e-fuels and instead incentivizes transitional fuels like LNG and first-generation biofuels. They argue that without firmer rules, e-fuel deployment will be delayed despite its central role in meeting the IMO's 2050 decarbonization goals. IMO Secretary General Arsenio Dominguez, however, reaffirmed that the framework will enter into force on April 1, 2027, and emphasized that once adopted, the organization will immediately begin work on implementation guidelines, funding arrangements, and enforcement from 2028.

The support from green fuel producers highlights the Framework's transformational potential to mobilize investment in emerging clean-fuel industries. Green fuels require high upfront capital, long development timelines, and policy certainty before investors commit to large-scale production in order. The fact that fuel innovators are publicly calling for adoption indicates that the Framework is seen as a critical anchor for market confidence, capable of accelerating deployment that market forces alone would not deliver.
This update also reveals the structural tension between incumbent fossil-fuel suppliers and new-entrant clean-fuel producers. The maritime sector will continue to favor lower-cost fossil-based options like LNG, without targeted regulatory pressure, even though they do not align with long-term decarbonization goals. The IMO Framework is not simply a climate instrument, but also a market-shaping catalyst that influences which fuels industries will define the next generation of maritime transport.

Oppositions Postponed the Adoption of the Net-Zero Framework

Member states of the IMO's Marine Environment Protection Committee on October 17 voted to delay adoption of the Net-Zero Framework for one year after strong opposition from the U.S. and Saudi Arabia, whose pressure tactics contributed to a divided vote and adjournment of the session. 57 countries voted in favour of a delay, 49 against a delay and 21 abstained. The postponement drew concern from industry groups and environmental advocates who warned that shipping decarbonization now faces greater uncertainty, though some industry representatives hope the extra time will allow improvements to the regulatory design.

The one-year postponement underscores how the geopolitical positions of major fossil-fuel exporters, particularly the U.S. and Saudi Arabia, can significantly disrupt global climate governance in the maritime

sector. Despite broad support among many IMO member states, pressure from these two countries shifted votes and derailed what would have been a landmark step in implementing a unified decarbonization regime for international shipping. The delay injects uncertainty into investment planning for clean fuels, slows regulatory momentum, and risks widening the gap between regional actions (such as the EU ETS Maritime) and global rules. While some industry actors hope the additional time might refine elements of the Framework, the broader consequence is a lost year in a sector already facing tight timelines to meet the 2023 IMO GHG Strategy's indicative checkpoints. The episode illustrates how the political and commercial interests of a small number of states can impede collective progress, even when the majority seeks accelerated action.

E. What's Next for IMO Net-Zero Framework

Looking ahead, the IMO Net-Zero Framework remains the most consequential instrument for aligning global shipping with the 2023 IMO Strategy and the Paris Agreement temperature goals. Its combination of a fuel-intensity standard, a sector-wide carbon pricing mechanism, and a dedicated Net-Zero Fund provides the clearest pathway yet for accelerating investment in zero and near-zero emission fuels, upgrading port and vessel infrastructure, and creating a level playing field across all flags and trade routes. The postponement of adoption makes international support even more essential. Without coordinated action, the sector risks deepening regulatory fragmentation and delaying the scale-up of clean-fuel markets at a moment when rapid progress is critical.

Continued diplomatic engagement will be needed to rebuild consensus and counter the obstruction from major fossil-fuel exporters. The strong opposition led by the United States not only misrepresents the Framework as a "global tax" but also places short-term commercial interests above the long-term stability and competitiveness of the maritime sector. If the Framework is to succeed when it returns to the agenda next year, member states will need to reaffirm their commitment to a rules-based multilateral process and resist attempts to politicize or weaken a mechanism that is central to global decarbonization. The next IMO session will therefore be a decisive test of whether the international community can act collectively to steer maritime transport onto a credible net-zero trajectory.

After being officially adopted, a central challenge in the next phase will be the scaling of low-and zero-emission marine fuels. In the short run, many of these fuels face high costs, limited supply chains, and unresolved infrastructure constraints, making rapid, sector-wide deployment difficult. However, the absence of a global framework would almost certainly prevent these fuels from moving beyond the pilot stage. As reflected in industry responses, green fuel producers are still in a start-up phase and require strong, predictable policy signals to attract capital and expand production. The Net-Zero Framework does not guarantee immediate feasibility, but it creates the minimum conditions under which large-scale deployment can begin and gradually move from demonstration to commercial viability.

Equally important is how revenues collected under the Framework are used. While the Net-Zero Fund has an essential role in supporting research, infrastructure, and capacity-building, the most effective use of

funds may lie in rewarding ships that over-comply with GHG intensity targets. Directly awarding over-performing vessels allows shipping companies themselves to act as the primary drivers of decarbonization investment, leveraging their operational knowledge to choose the most cost-effective technologies and fuel pathways. This does not imply that centralized investment decisions by the Fund or IMO are unnecessary; rather, it suggests that market-driven investment by shipping companies and strategic support from the Fund should be complementary. Where these priorities diverge, allowing both approaches to coexist can increase resilience and innovation across the sector.

Main Sources & Expanded Reading

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Draft revised MARPOL Annex VI, International Maritime Organization, April 11, 2025
IMO approves net-zero regulations for global shipping, International Maritime Organization, April 11, 2025
The IMO Net-Zero Framework - FAQs, International Maritime Organization, last visited on December 23, 2025
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This season's Climate Change Actor Profile on IMO Net-Zero Framework was primarily researched and written by Yunchao Mao, Part-time Research Assistant at the Institute for China-America Studies.

Climate Research, Analysis, and Beyond

Scientific Research Results & Releases

October 2025

- Journal Article: Efficiency Only? An Analysis of Avoid, Shift and Improve Strategies in EU Member States' Long-Term Mitigation Policy, *Energy Policy*, Vol. 208
- Research Article: Climate-Linked Escalation of Societally Disastrous Wildfires, *Science*, Vol. 390, Issue 6768, page 53-58
- Journal Article: Impacts of Climate Change on Extreme Weather Indices in Ecuadorian Cities: A Socioeconomic Analysis, *Weather and Climate Extremes*, Vol. 50
- Journal Article: Intensifying Impacts of Compound Drought and Heatwave Events on Water Use Efficiency in U.S. Corn And Soybean, *Agriculture and Forest Meteorology*, Volume 375
- Research Article: Extensive Fire-Driven Degradation in 2024 Marks Worst Amazon Forest Disturbance in Over 2 Decades, *Biogeoscience*, Vol. 22, Issue 19
- Research Article: Tropical Forest Carbon Offsets Deliver Partial Gains Amid Persistent Over-Crediting, *Science*, Vol. 390, Issue 6760, page 182-187
- Journal Article: Mountain Glaciers Recouple to Atmospheric Warming Over The Twenty-First Century, *Nature Climate Change*, Vol. 15, page 1212-1218
- Journal Article: Sea-Level Rise at The End of The Last Deglaciation Dominated by North American Ice Sheets, *Nature Geoscience*, Vol. 18, page 1167-1173
- Journal Article: Carbon Storing in United States Cities Through Biogenic Storage and Concrete Carbonation in The Built Environment, *Nature Communications Earth & Environment*, Vol. 6, Article number 829

November 2025

- Journal Article: Powering Air Travel with Jet Fuel Derived from Municipal Solid Waste, *Nature Sustainability*, Vol. 8, page 1480-1490
- Journal Article: Future Methane Emissions from Lakes And Reservoirs, Nature Water, Vol. 3, page 1397-1410
- Research Article: Substantially Underestimated Winter CO2 Sources of The Southern Ocean, *Science Advances*, Vol. 11, Issue 45
- Journal Article: Global Greenhouse Gas Emissions Mitigation Potential of Existing And Planned Hydrogen Projects, *Nature Energy*
- Journal Article: Hybridization Mitigates Climate Change Risk In Mountainous Birds, *Nature Climate Change*, Vol. 15, page 1378-1387
- Original Paper: Influence of Climate Change on Livestock Diseases Occurrence in Burkina Faso, West Africa, *International Journal of Biometeorology*, Vol. 69, page 3539-3553
- Journal Article: Mangrove Sediment Carbon Burial Offset by Methane Emissions from Mangrove Tree Stems, *Nature Geoscience*, Vol. 18, page 1224-1231
- Research Paper: Heatwaves in A Net Zero World, *Environmental Research: Climate*, Vol. 4, NO. 4
- Research Article: Increasing Risk of Mass Human Heat Mortality if Historical Weather Patterns Recur, *Nature Climate Change*
- Research Article: Mapping The Climate Niches of Forest Insects And Diseases in Canada under Current And Future Climate, *Scientific Reports*, Vol.15, Article number 40996

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- Journal Article: National Circumstances Matter: How Climate Change Vulnerability And Political Instability Affect Greenhouse Gas Coverage In Nationally Determined Contributions, *Environmental Science & Policy*, Vol. 175
- Research Article: Urbanization Is Projected to Increase Local Surface Temperature by 2100, *Nature Communication Earth & Environment*, Vol. 6, Article Number 988
- Policy Brief: Balancing Thermal Power Decarbonization And Energy Security Under Hydroclimatic Risks, *Nature Sustainability*
- Journal Article: Community-Based Approaches in Disaster Risk Reduction and Climate Change Adaptation: An Analysis of Applied Participatory Processes, *Climate Change*, Vol. 178, Article number 225
- Journal Article: Pensions as Hidden Green Levers: The Impact of China's New Rural Pension Scheme on Household Energy Transition, *Energy Policy*, Vol. 210
- Research Article: Vehicle-To-Home Charging Can Cut Costs And Greenhouse Gas Emissions Across The USA, *Nature Energy*, Vol. 10, page 1458-1469
- Review Article: Indigenous Peoples' Voices And Engagement on Climate Change: Towards Improved Health and Wellbeing, Frontiers in Climate, Volume 7
- Journal Article: Evidence on The Relationship Between Billion-Dollar Weather Disasters and State-Level Climate Policy Adoption in The United States, *Climate Change*, Vol. 179, Article number 3

Third-Party Views on Climate Change

China is positioning itself as a global climate leader through ambition, narrative, and strategic transition.

- As I see it | China is Now The Good Guy in Climate Change (*South China Morning Post*, December 24)
- China Eyes New Phase of Green Transition (*China Daily*, December 6)
- Can China Fill The Vacuum in Climate Leadership? (*Reuters*, November 4)
- Assessing China's New Climate Commitments (Center for Strategic & International Studies, October 2)

From deadly floods to rising costs, climate impacts are growing harder to ignore.

- To Bolster Resilience and Partnerships in the Global South, Launch a Development Insurance Facility (Center for Strategic & International Studies, December 18)
- Can Pakistan Adapt to Climate Disaster? (*Foreign Policy*, December 02)
- How Climate Change Is Fueling More Deadly and Destructive Floods (Center for American Progress, November 25)
- COP30's Dangerous Omission: Brazil's people-centered climate vision risks abandoning the most vulnerable. (*Foreign Policy*, November 4)
- Hurricane Melissa Maxed Out What Scientists Thought Was Possible (*The New York Times*, October 29)
- How Much Is Climate Change Costing US Households? (Brookings Institution, October 23)

Clean energy ambitions face hard questions about cost, timing, and contested visions of the future.

- How Fossil Fuels and Global Extreme Weather Increase Americans' Food Prices (Center for American Progress, December 22)
- Pausing Offshore Wind Projects Is A Blow To America's Energy Future (*The Washington Post*, December 22)
- The Future of The Energy Transition Will Be Fractured, Bumpy and Long (Reuters, November 17)
- Someone Has To Pay for The End of The Oil and Gas Age (*The Guardian*, November 14)
- The Global Energy Transition Is About Securing the Future, Not Managing Decline (Stimson Center,

November 3)
- Britain Can't Afford to Delay Its Green Energy Transition (*The Observer*, October 29)
- Winning The Argument on Energy Consumption (Energy in Buildings & Industry, October 1)

Political and fiscal headwinds are testing the limits of climate policy ambition.
- New York Realizes It Cannot Afford Its Green Promises (*The Washington Post*, December 19)
- Taxing EVs Is a Treacherous Experiment for the UK (*Bloomberg*, December 3)
- Europe Must Defend Its Deforestation Law for Forests, Business and Its Reputation (*Climate Home News*, December 1)
- Beyond Climate Policy: The Economy-Wide Repercussions of Eliminating the Greenhouse Gas Reporting Program (Center for Strategic & International Studies, December 15)
- How to Govern Climate Policy in A Divided World (Brookings Institution, November 14)
- Why Trump Is Looking The Wrong Way in The Arctic (*The Economist*, October 16)
- We've Hit A Climate Tipping Point, but Leaders Seem Unlikely to Act (New Scientist, October 15)

At COP30, ambition met reality as global momentum collided with political limits.
- From Baku to Belém and Beyond: How We Turn A Climate Finance Roadmap Into Reality (*Climate Home News*, December 16)
- COP30: Big Pledges on Renewables and Industry, but Ambition Falters on Ending Fossil Fuels (*Reuters*, November 27)
- COP30: Climate Adaptation Takes Center Stage (Stimson Center, November 24)
- The Real Failure on Climate Didn't Happen in Brazil (*Bloomberg*, November 23)
- COP30 Escaped Echo Chamber Despite Trump No-Show (*Financial Review*, November 23)
- The UK Used To Be A World Leader On Climate – Does It Still Count? (*Independent*, November 19)
- With Trump Absent from COP30 Talks, The World Moves on Without U.S. (The Washington Post, November 14)
- What Will COP30 Mean for Climate Action? (Brookings Institution, November 10)

Ten years after Paris: promises measured, gaps exposed.
- What the Paris Agreement has Achieved for Asia, What Gaps Remain? (Asia Society, December 11)
- '10 Years of Climate Sabotage': Activists Denounce Macron, Trump to Mark Paris Agreement Anniversary (Greenpeace, December 11)
- The World Lost The Climate Gamble. Now It Faces A Dangerous New Reality (*The Conversation*, November 22)
- It's Been A Dangerous Decade Since The Paris Climate Agreement, but There's Still Reason For Hope (*CNN*, November 9)
- The Rapid Approach of The 1.5°c Global Warming Threshold Since The Paris Agreement (Copernicus, November 5)

Climate-Focused Conferences & Events

Multinational Conferences & Global Forums

UN Climate Change Conference (COP 30)

United Nations
November 10-November 21
Belém, Brazil

- From the Organizer: "COP30 will bring together world leaders and negotiators from the member states (or Parties) of the UN Framework Convention on Climate Change (UNFCCC) to further global progress, with business leaders, young people, climate scientists, Indigenous Peoples, and civil society sharing insights and best practices to strengthen global, collective and inclusive climate action."
- Primary Themes: climate crisis, limiting the global temperature rise to 1.5 degrees Celsius, helping vulnerable communities adapt to the effects of climate change, and achieving net-zero emissions by 2050
- Forum Outcome: "We've committed to speeding up the full implementation of national climate plans, and to strive to do better, collectively and cooperatively, together with the Action Agenda, driving forward this acceleration."

IUCN World Conservation Congress

International Union for Conservation of Nature
October 9- October 15
Rome, Italy

- From the Organizer: "The world stands at a critical juncture after decades of conservation efforts: the path we are on is still unsustainable. Climate change, biodiversity loss, pollution, and global health crises are all being compounded by growing global political and socio-economic instability."
- Primary Themes: Scaling Up Resilient Conservation Action, Reducing Climate Overshoot Risks, Delivering on Equity, Transitioning to Nature-Positive Economies and Societies, Disruptive Innovation and Leadership for Conservation
- Forum Outcome: "The 2025 IUCN Congress brought together over 10,000 attendees, on-site and online, as was the first to ever host a World Summit of Indigenous Peoples and Nature. The IUCN Congress brought together decision-makers from government, civil society, Indigenous Peoples' Organisations, academia, and business for more than 1000 events aimed at setting the conservation and sustainable development agenda for decades to come."

First International Green Cities Conference

Food and Agriculture Organization of the United Nations
October 14- October 15
Rome, Italy

- From the Organizer: "The Green Cities Initiative (GCI) supports cities in becoming more sustainable, resilient and inclusive by integrating urban forestry, urban agriculture and circular bioeconomy solutions."
- Primary Themes: FAO Green Cities Network, urban landscape, urban food system, urban greening, peri-urban areas, urban sustainability, resilience
- Forum Outcome: "It presented the FAO Green Cities Principles and Criteria, a set of conditions that cities must meet to be recognized as FAO Green Cities. The conference also involved the adoption of a Conference Communiqué, which includes commitments and next steps, to be presented at the World

Urban Forum, Baku 2026."

14th UNESCO Youth Forum

United Nations Educational, Scientific and Cultural Organization
October 27 - October 28
Samarkand, Uzbekistan

- From the Organizer: "The choice of theme reflected an urgent reality that unites young people across borders: climate change is not only an environmental crisis but also a social crisis that profoundly affects their lives and futures."
- Primary Theme: Climate action and social impacts, particularly for young people
- Forum Outcome: "Youth Forum participants engaged in discussions, refined their proposals and adopted the Conclusions of the Youth Forum. These included a Call to Action, Global and Regional Recommendations, and five selected youth-led projects."

Fifth EU Clean Air Forum

European Commission
December 1- December 2
Bonn, Germany

- From the Organizer: "The EU's policy to reduce air pollution is delivering solid results. Air quality has improved steadily over the past decades, and the EU is on track to cut the health impacts of air pollution by more than 55% by 2030 compared to 2005."
- Primary Themes:
- Forum Outcome: "Despite overall progress, some challenges persist. Eight Member States are non-compliant with one or more reduction commitments that were to be met by the year 2020, and several may struggle to meet their 2030 commitments. Achieving these will require continued efforts and close coordination across policy areas to ensure further reductions in air pollutants."

Public Events & Panel Discussions

-Upcoming Events-

Stories to Watch 2026
Event by World Resource Institute | January 29

Launching the C-PACE Embodied Carbon Model Policy Primer
Event by Rocky Mountain Institute | January 29

Sector-Specific Deep Dives on Low-Carbon Procurement
Event by Rocky Mountain Institute | January 14

Powering Prosperity and the New Electricity Economy
Event by American Enterprise Institute | January 14

Turning Loss and Damage Into Action: Financing Climate Mobility via the Loss and Damage Fund
Event by Carnegie Endowment for International Peace | January 13

2026 in the Americas: Stories that may drive the news

Event by Atlantic Council | January 12

Energy Trends Across APEC: Insights from APERC's 9th Energy Outlook
Event by Center for Strategic and International Studies | January 8

-Past Events-

EV Skid Marks and Year in Review
Event by Center for Strategic and International Studies | December 19

Mainstreaming Nature in Multilateral Development Banks
Event by World Resource Institute | December 17

What Climate New Year's Resolutions Actually Work - and Who Should Be Making Them?
Event by World Resource Institute | December 16

The energy challenges of Taiwan and Asia's AI ambitions
Event by Brookings Institute | December 12

Partnerships Plugged In: Regional Coalitions Advancing Energy Policy
Event by World Resource Institute | December 10

Land Use Change Emissions: Bringing Consistency to GHG Accounting and Reporting
Event by Land Carbon Lab | December 9

The Future of the EIA: A Conversation with Administrator Tristan Abbey
Event by Center for Strategic and International Studies | December 4

From Policy to Platform: Turning Sustainable Energy Frameworks into Digital Systems that Drive Real Change
Event by Johns Hopkins School of Advanced International Studies | December 4

ExxonMobil's 2025 Global Outlook
Event by Center for Strategic and International Studies | December 2

Introducing Global Nature Watch: AI-Powered Insights for Nature
Event by Land Carbon Lab | November 20

Urban Greening: Moving from Practice to Policy
Event by World Resource Institute | November 18

IEEJ Energy Outlook 2026: Deepening Uncertainties Surrounding the Challenges of Energy Transition
Event by Center for Strategic and International Studies | November 14

A new fiscal paradigm: Domestic resource mobilization, climate adaptation finance and the care economy
Event by Brookings Institute | November 12

Antarctica at the Crossroads: Environment, Security, and Multilateral Cooperation
Event by Stimson Center | November 5

Renewable Energy and Peace in the Central African Republic: An Opportunity for the United Nations to Lead by

Example
Event by Stimson Center | November 3

ABB's Chairman Peter R. Voser on innovating for the electrified economy
Event by Atlantic Council | October 28

The State of Climate Action in 2025
Event by World Resource Institute | October 28

RMI at Trellis Impact
Event by Rocky Mountain Institute | October 28-30

Beyond the Ton: Documenting the Benefits to Communities and Ecosystems at the Heart of Carbon Projects
Event by Rocky Mountain Institute | October 23

Europe's Energy Transition: From Russia's Invasion of Ukraine To Trump's 'Energy Dominance' Agenda
Event by Brookings Institute | October 22

Closing the Climate Finance Gap in Conflict-Affected States: A Conversation with the Green Climate Fund
Event by Stimson Center | October 16

Ocean Progress Symposium 2025: Advancing Conservation Close to Shore
Event by Center for American Progress | October 15

Climate Week at Penn
Event by University of Pennsylvania | October 13-17

Tracking New NDCs and Their Impact
Event by World Resource Institute | October 9

The Future of Critical Minerals and National Security: 2025 CSIS-West Point Conference
Event by Center for Strategic and International Studies | October 8

Introducing the Massachusetts Carbon Dioxide Removal Study
Event by Rocky Mountain Institute | October 8

2025 Energy & Defense Summit
Event by Atlantic Council | October 8

"Sensing the Climate": How Do International Policy Makers 'Sense' Nature?
Event by Johns Hopkins School of Advanced International Studies | October 6

International Disputes in Animal Law
Event by The George Washington University Animal Law | October 2

Climate Clarity: Combatting New Denialism in the United States
Event by Carnegie Endowment for International Peace | October 1

ICAS BCCC Program Updates

ICAS Upcoming Event

US-China Outlook 2026: Navigating Competition, Cooperation, and Global Implications

Virtual

January 15, 2026 12:00 PM – 1:20 PM EST

On Thursday, January 15, 2026, ICAS will host a virtual event on the outlook of U.S.-China relations after the first year of the Second Trump Administration. Moderating the panel is ICAS' Sourabh Gupta, and panelists include Dr. Robert Sutter (Elliott School of George Washington University), Dr. David Kang (University of Southern California), Dr. Zhiqun Zhu (Bucknell University), and Dr. Yawei Liu (The Carter Center). The conversation will revolve around the following questions:

2026 Trajectories and Scenarios Beyond

Looking towards 2026, what are the expectations on both sides from the planned reciprocal visits by the two presidents? Looking beyond 2026, what are the most plausible scenarios for the future of U.S.–China relations? How should governments and institutions prepare for uncertainty in this evolving relationship?

Domestic Politics and Policy Choices

How will domestic political pressures in Washington and Beijing constrain leaders' ability to adjust course in the bilateral relationship in 2026? In what ways will nationalism, public opinion, and regime legitimacy affect foreign policy decision-making on both sides?

Security Flashpoints and Risk Management

How do Taiwan, the South China Sea, and broader Indo-Pacific military dynamics influence overall U.S.–China stability? What does the Trump administration's National Security Strategy portend for its China policy as well as Indo-Pacific policy in 2026? Are existing crisis communication channels and confidence-building measures adequate given increased military activity?

Technology, Innovation, and Control

How will intensifying competition in critical technologies such as semiconductors, artificial intelligence, and advanced manufacturing shape the bilateral relationship in 2026? To what extent can export controls and industrial policies achieve strategic objectives without accelerating fragmentation of global innovation systems?

Economic Interdependence and Decoupling

Is selective or "managed" decoupling a stable long-term outcome, or merely a transitional phase in U.S.–China economic relations? How will trade, investment and supply chains realign in 2026? What sectors are most vulnerable to policy-driven disruption?

Learn More & RSVP:
https://chinaus-icas.org/event/us-china-outlook-2026-navigating-competition-cooperation-and-global-implications/

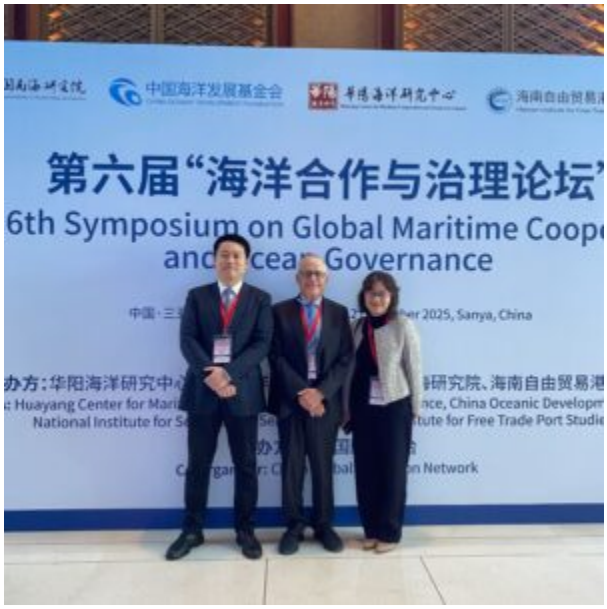
ICAS Academic Engagement

The 6th Symposium on Global Maritime Cooperation and Ocean Governance

Sanya, China

December 10-12, 2025

Executive Director Dr. Nong Hong, Research Associate Yilun Zhang, and Advisory Board Member Gordon Houlden attended the 6th Symposium on Global Maritime Cooperation and Ocean Governance held in Sanya, China on December 10-12, 2025. The event is organized by the China-Southeast Asia Research Center on the South China Sea, and co-organized by Huayang Center for Maritime Cooperation and Ocean Governance.



Dr. Nong Hong presented on the Session 2 Panel titled “Managing Maritime Disputes: Regional Practices and International Experience.” Mr. Gordon Houlden moderated Session 4, “Sustaining Peace in the South China Sea: Geopolitics and the Construction of Regional Order” held on December 10. Mr. Yilun Zhang was on the Session 7 Panel titled “Global Ocean Governance: Models and Pathways” on December 11.

Learn More: https://chinaus-icas.org/event/the-6th-symposium-on-global-maritime-cooperation-and-ocean-governance-2/

ICAS MAP Spotlight

The IMO and Global Maritime Decarbonization

By Zhangchen Wang

November 26, 2025

The one-year postponement of the Net-Zero Framework carries significant negative momentum for maritime decarbonization. The delay reintroduces uncertainty for the private sector by disrupting investment planning and slowing capital flows into alternative-fuel infrastructure. Companies that had already begun integrating carbon-pricing assumptions into charterparties, fuel-supply agreements, and ship-management contracts now face costly revisions, as provisions drafted around an expected 2027–2028 compliance timeline no longer align with regulatory reality and may need to be renegotiated again once the framework returns in 2026...

Continue Reading: https://chinaus-icas.org/research/the-imo-and-global-maritime-decarbonization/

MAP & BCCC Commentary

Ocean Governance in the Arctic: Balancing the Three Cs—Competition, Cooperation, and Conservation

By Nong Hong

October 28, 2025

As global ocean change accelerates, from rising sea levels to shifting trade routes, the Arctic has emerged as both a barometer and a battleground for how humanity manages shared spaces. Once seen as remote and inhospitable, the Arctic Ocean now stands at the nexus of science diplomacy, maritime governance, and great-power politics. Questions that once belonged to scientific circles—who governs the Arctic, how its resources are managed, and how its ecosystems are protected—have moved to the forefront of international discourse. Against this backdrop, the 2025 Arctic Circle Assembly convened, providing a vivid window into how nations and institutions seek to reconcile competition, cooperation, and conservation in one of the planet's most rapidly transforming regions...

Continue Reading:
https://chinaus-icas.org/research/ocean-governance-in-the-arctic-balancing-the-three-cs-competition-cooperation-and-conservation/

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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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