Archaeology Is Flipping The Script On What We Know About Ancient Mesoamerica

Mesoamerica – Map: en.wikipedia.org

Recent archaeology emerging from ancient Mesoamerica is flipping the script of public understanding about the people and institutions that inhabited this world: the evidence tells us that cooperative and pluralistic government was at least as common as and more resilient than despotic states.

This more complex picture and the achievements of Mesoamerica's peoples are all the more impressive given the area's rugged terrain and resource constraints. Compared to ancient Eurasia, the inhabitants of Mesoamerica—the region stretching from Costa Rica to central Mexico—lacked beasts of burden and wheeled transport, and the use of metals was generally limited.

Until recently, our understanding of how most societies and early states developed was heavily grounded in interpretations of urban societies in Eurasia. Despotic, coercive rule was assumed (except for ancient Athens and republican Rome), the actions of the elite were ascribed great importance, and core functions of the economy were presumed to be in the hands of the ruler.

Precolonial Mesoamerica doesn't fit this cookie-cutter framework: neither was economic production or distribution centrally controlled by despotic rulers, nor was governance in societies with very large populations universally coercive.

This new perspective is the outgrowth of a decades-long shift in archaeological research's focus from temples and tombs to regional settlement patterns, urban layouts, house excavations, domestic economies, and agricultural production.

By concentrating on the archaeological record, recent generations of researchers have brought fresh attention to features of precolonial Mesoamerica that did not fit entrenched stereotypes, many of which had their roots in the 19th century. Mesoamerica's cities and large-scale societies arose independently of other global regions, spawned by their own regional populations. Mesoamerican technological development never experienced the centralizing impact of the monopolization of bronze weaponry through control of scarce tin deposits, nor the "democratizing" or "decentralizing" effects of the adoption of more widely available iron.

Mesoamerica was also spared the stark inequalities in military and transportation technology that appeared in Eurasia when some societies developed the chariot, serious naval capabilities, and fortified palaces while others lagged behind. In Mesoamerica, military might came through the control of large infantries using weapons crafted primarily from widely available stone, all of which made for generally more balanced political relations than in Eurasia.

Pre-Hispanic Mesoamerica is therefore emerging as an ideal place to examine the different ways that humans coalesced in urban contexts, in both collective and autocratic political formations, without some of the key factors that earlier scholars have traditionally seen as necessary or transformative for the rise of premodern societies.

How were these large, preindustrial urban centers in Mesoamerica organized? Were they long-lasting? And if so, what accounts for their comparative degrees of resilience across time?

In a 2018 study, we coded data from a carefully selected sample of 26 precolonial Mesoamerican cities and prominent political centers. We found that more than half of them were not despotically ruled and that the more collective political centers had greater resilience in the face of droughts and floods, and warfare or shifts in trade. Cities that addressed their social challenges using more collective forms of governance and resource management were both larger and somewhat more resilient than the cities with personalized rulership and more concentrated political power.

In general, collectively organized political centers relied more heavily on internal finance generation, such as taxes, as compared to the more autocratic centers that relied more on external financing, such as monopolized trade networks and war booty. The more that political elites can support themselves without relying on financing from the general population, the less they face accountability from the people, and the greater the likelihood that governance and power are hoarded. Additionally, higher levels of internal financing and communal resources often corresponded with evidence of the wider circulation of public goods and the bureaucratization of civic offices. Collectively organized centers with these features as well as spatial layouts, such as large open plazas and wide streets, that provided opportunities for householders and urban dwellers to communicate and express themselves seem to have fostered community persistence as major centers.

In a later study that included an updated and expanded sample of 32 well-researched Mesoamerican cities, we found that centers that were both more bottom-up and collective in their governance were more resilient. While some of these cities had palaces and monuments to rulers as their focal points, others featured more shared and equitably distributed forms of urban infrastructure. This includes apartment compounds, shared terraces or walls within neighborhoods, neighborhood plazas, temples and other civic buildings, and shared roads and causeways, all of which required cooperation and collective labor for their construction and maintenance and would have facilitated more regular face-to-face interaction and periodic public gatherings.

The implications of this archaeological research are too informative and powerful to stay put in textbooks. They resonate with evolving views of our present world, which are finding that public space, open communication, fair taxation, and effective bureaucracy can be cornerstones of well-being. These parallels with and understandings from the past can be insightful for us today as models to guide our future planning and identify the social models that best position us to survive the tests of time.

Author Bio:
Gary M. Feinman is an archaeologist and the MacArthur curator of anthropology at the Field Museum of Natural History in Chicago.
David M. Carballo is a professor of archaeology, anthropology, and Latin American studies and assistant provost for general education at Boston

University.

Source: Independent Media Institute

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Why Are Archaeologists Unable To Find Evidence For A Ruling Class Of The Indus Civilization?

Adam S. Green – Photo: University of York

What we can learn from an ancient egalitarian civilization in the Indus Valley.

Little more than a century ago, British and Indian archaeologists began excavating the remains of what they soon realized was a previously unknown civilization in the Indus Valley. Straddling parts of Pakistan and India and reaching into Afghanistan, the culture these explorers unearthed had existed at the same time as those of ancient Egypt and Mesopotamia, and covered a much larger area. It was also astonishingly advanced: sophisticated and complex, boasting large, carefully laid out cities, a relatively affluent population, writing,

plumbing and baths, wide trade connections, and even standardized weights and measures.

What kind of a society was the Indus Valley Civilization, as it came to be known? Who lived there and how did they organize themselves? Archaeologists and other experts ask these questions to this day, but the first explorers were already noticing some unique features.

In Mesopotamia and Egypt, "much money and thought were lavished on the building of magnificent temples for the gods and on palaces and tombs of kings," observed Sir John Marshall, who supervised the excavation of two of the five main cities, Harappa and Mohenjo-daro, "but the rest of the people seemingly had to content themselves with insignificant dwellings of mud." In the Indus Valley, "the picture is reversed and the finest structures were those erected for the convenience of the citizens. Temples, palaces, and tombs there may of course have been, but if so, they are either still undiscovered or so like other edifices as not to be readily distinguishable from them."

In its heyday, from about BC 2600 to BC 1900, the Indus Valley Civilization created what may have been the world's most egalitarian early complex society, defying long-held presumptions about the relationship between urbanization and inequality in the past. Its large cities were expansive, planned, and boasted large-scale architecture, including roomy residential houses, and smaller settlements in the surrounding areas appeared to support a similar culture with a similar standard of living.

The most tantalizing feature of the ancient Indus Valley remains is what they appear to lack: any trace of a ruling class or managerial elite. This defies the longtime theoretical assumption that any complex society must have stratified social relations: that collective action, urbanization, and economic specialization only develop in a very unequal culture that takes direction from the top, and that all social trajectories evolve toward a common and universal outcome, the state. Yet, here was a stable, prosperous civilization that appeared to remain that way for centuries without a state, without priest-kings or merchant oligarchs, and without a rigid caste system or warrior class. How did they manage it?

Unfortunately, in the early decades of exploration and research, archaeologists tended to assume that lack of evidence of a top-down, hierarchical society in the

Indus Valley remains meant only that they had not yet been found. Some have argued that lack of evidence of inequality only indicates that the region's ruling class was very clever at disguising the boundaries between itself and other social strata. Pointing to the fact that Indus Valley burial sites contain no monumental tombs, some researchers suggest that the rulers may have been cremated or deposited in rivers, as was the practice in other imperial cultures. But cremation is not archaeologically invisible; the remains of other cultures often include evidence of it.

More recently, archaeologists have been willing to go back to the original explorers' observations and use the evidence directly in front of them to develop theories about ancient life in the Indus Valley Civilization. Archaeological data from South Asia has improved greatly: and there is much more of it. Numerous Indus sites are now known to archaeologists that decades ago were not, and the environmental contexts that enabled urbanization in the region—climate, natural resources—are now much clearer. Archaeologists have also honed a strong set of tools for identifying inequality and class divisions: from mortuary data, palace assemblages, aggrandizing monuments, written records, and soon, possibly, from household data. Yet, in a century of research, archaeologists have found no evidence of a ruling class in the Indus Valley that is comparable to those recovered in other early complex societies.

In the late 1990s, Indus archaeologists started to consider a new concept that seemed to better fit the facts. Heterarchy asserts that complex political organization, including cities, can emerge through the interaction of many different, unranked social groups, rather than from top-down decisions by an elite: that cooperation, not domination, can produce collective action. It's now widely argued that multiple social groups contributed to the construction of Indus cities and the economic activities that took place in them, and that none seemed to dominate the others.

Bolstering this argument, no evidence exists that any group of Indus producers was excluded from the use of scarce materials that craftspeople had to obtain from long distances away, or that particular groups limited access to those materials to seize a higher position for themselves in Indus society. One of the most distinctive and technically dazzling products of the Indus culture are stamped seals engraved with imagery and text; over 2,500 have been found at Mohenjo-daro alone. But the seals were produced by many different groups of

artisans in many locations, and there is no evidence that a ruling class controlled production. Technological styles tended to cross-cut different groups of artisans, indicating a great deal of openness and knowledge sharing.

Indus city-dwellers built large- and small-scale public buildings; the Great Bath at Mohenjo-daro is a massive structure that contained a large paved bath assembled from tightly fitted baked bricks, waterproofed with bitumen and supplied with pipes and drains that would have allowed control over water flow and temperature. At Mohenjo-daro, nonresidential structures were built atop brick platforms that were as substantial as the structures erected on top of them, and would have required a great deal of coordinated action. It's been calculated that just one of the foundation platforms would have required 4 million days of labor, or 10,000 builders working for more than a year.

Yet, at both Harappa and Mohenjo-daro, these large nonresidential structures were relatively accessible, suggesting that they were "public," as opposed to palaces or administrative centers restricted to a privileged class. Some of these may have served as specialized spaces for exchange, negotiation, and interaction between different groups clustered in neighborhoods or along important streets and roads. These spaces may have helped the city-dwellers maintain a high degree of consensus on planning and policy and ensured that no one group was able to accumulate wealth at the expense of the rest.

The Indus Valley remains have yet to yield all of their riches. The Indus script has yet to be deciphered, and we still don't know why the civilization started to decline in the second millennium BC. One of the most positive recent developments has been a dramatic increase in data and interest in the civilization's small-scale settlements, which may shed light on the question whether these settlements were qualitatively different from one another or from the cities—and how far Indus egalitarianism extended across its broader landscape.

What we have already found, however, suggests that egalitarianism may have been a boon to collective action: that distinct social groups may have been more willing to invest in collective action if the benefits were not restricted to a subset of elites. That suggests that heterarchy may act as a kind of brake on coercive power amongst social groups, and across society as a whole.

If this is the case, and after a century of research on the Indus civilization, archaeologists have not found evidence for a ruling class comparable what's been recovered in other early complex societies, then it's time to address the Indus Valley's egalitarianism.

Urbanization, collective action, and technological innovation are not driven by the agendas of an exclusionary ruling class, the evidence suggests, and can occur in their total absence. The Indus Valley was egalitarian not because it lacked complexity, but rather because a ruling class is not a prerequisite for social complexity. It challenges us to rethink the fundamental connections between collective action and inequality.

The priest-king is dead: or, in this case, most likely never existed.

Author Bio:
Adam S. Green is a lecturer in sustainability at the University of York. He is an archaeological anthropologist focused on South Asia, specializing in the comparative study of early states through the lenses of technology, the environment, and political economy. Follow him on Twitter

Source: Independent Media Institute

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Why Turkey And Hungary Are Currently Blocking Sweden From Joining NATO

Vijay Prashad

On July 11-12, 2023, the 31 members of the North Atlantic Treaty Organization (NATO) will hold their annual summit in Vilnius, Lithuania. To prepare for the summit, NATO Secretary General Jens Stoltenberg met with U.S. President Joe Biden to discuss the agenda for the summit. They spoke about the importance of Western support for Ukraine "for the long haul" and Stoltenberg told Biden that "he looks forward to welcoming Sweden as a full member of NATO as soon as possible."

In their joint press conference on June 13, neither Biden nor Stoltenberg mentioned anything about Ukraine's membership of NATO, although both hoped that Sweden would become a member, "hopefully….very shortly," as Biden said. Despite noises in the German Bundestag from Christian Democratic members—such as urging by Roderich Kiesewetter—to bring Ukraine into NATO, there seems to be no appetite for any such move at present, least of all from German Chancellor Olaf Scholz who is being very cautious. Germany is wary of allowing Ukraine into NATO during a war, but has no problem—in principle—with Ukraine's membership in NATO. With Sweden, the chessboard is far more complicated.

Finland Joins, but Not Sweden

In May 2022, Finland and Sweden applied to join NATO, a military alliance that had—at that time—consisted of thirty countries (the most recent entrant being North Macedonia in 2020). At that time, Stoltenberg said of the applications, "It is great to see you both." Indeed, it was widely expected that these applications would be fast-tracked and that all four Scandinavian states would be within the military camp of NATO. Norway and Denmark were both founder members in 1949 (Denmark's accession was particularly necessary so that the U.S. could build a vast base on Danish colonized Greenland—Pituffik Space Base, the

northernmost U.S. military base—in 1951, displacing the local Inuit population).

Just short of a year later—on April 4, 2023—NATO welcomed Finland into the alliance. "Joining NATO is good for Finland," said NATO's Stoltenberg. "It is good for Nordic security, and it is good for NATO as a whole." Finland shares a very long (832-mile) border with Russia, the longest border of any European Union or NATO state. By joining NATO, Finland has doubled the NATO-Russia border. Finland began to build a border fence along the "riskiest areas," notably where Russian migrants might try to cross over. Social media in Finland mocked pictures released by the Border Guard of the fence, saying that it was just about useful for stopping horses; the "fence is not for horses," responded Lieutenant Colonel Jukka Lukkari.

At the ceremony to welcome Finland into NATO, Finland's President Sauli Niinistö said that his country's membership is "not complete without Sweden." Standing beside him, NATO's Stoltenberg said, "I look forward to also welcoming Sweden as soon as possible."

Why was Sweden not taken into the Western military alliance? In 1949, when NATO was established, the principle of decision-making adopted by the members was that of "consensus," which means that *all* countries must agree to any decision; this consensus decision-making applies particularly to the question of membership. Two NATO members—Hungary and Turkey—ratified Finland's entry into NATO but blocked that of Sweden. That they allowed NATO to welcome Finland, which—unlike Sweden—has a direct border with Russia, shows that it is not the war in Ukraine that troubles these two countries. They have other problems, directly with Sweden.

The Sweden Problem

At a press conference in Washington with U.S. Secretary of State Antony Blinken and NATO's Stoltenberg, Vivian Salama of the Wall Street Journal asked, "Are you concerned that Turkey is increasingly becoming a disruptive ally?" Both Blinken and Stoltenberg ducked the question, which led Kylie Atwood of CNN to ask directly about NATO membership for Sweden. Stoltenberg obliquely noted Turkey's concerns regarding the presence of the Kurdistan Workers' Party (PKK) in Sweden. "All NATO allies are of course ready to sit down and address those concerns, including the threats posed to Turkey by PKK," Stoltenberg said.

In 2009, when Sweden held the presidency of the Council of Europe, then-Prime Minister Fredrik Reinfeldt promised to shepherd Turkey into the European Union. Relations, at that time, were robust. Turkey's war in recent years on the Kurdish minorities in the southeast of the country and in northern Syria roused the exiled Kurdish community in Sweden. Protests in Stockholm have annoyed Turkish President Recep Tayyip Erdogan, who has repeatedly called in the Swedish ambassador to Ankara to complain about these protests. When an effigy of Erdogan was burnt by the Rojava Committee of Sweden, Sweden's foreign minister Tobias Billström wrote on Twitter, "Portraying a popularly elected president as being executed outside City Hall is abhorrent." This statement was not sufficient. Sweden's Prime Minister Ulf Kristersson said that his country had weak "anti-terror" laws and that his government was in talks with Ankara to see what could be done.

On his way to Azerbaijan on June 14, Erdogan dismissed the possibility that Sweden would be allowed to enter NATO this July.

In May 2023, Hungary's president Viktor Orban went to Doha to attend the Qatar Economic Forum. He was asked why his ruling alliance, Fidesz-KDNP, which dominates the parliament (135 out of 199 seats), refuses to ratify Sweden's entry into NATO. Orban bluntly said that he would not back down because "Sweden unfairly expresses a damaging opinion about the situation of democracy and the rule of law in Hungary." Sweden is not alone in these concerns, which have been made very strongly by thirteen Hungarian intellectuals in a powerful book ("Igazságosság—demokrácia—fenntarthatóság") last year.

Orban was very upset with Sweden for its support of a European Union parliamentary report from September 2022 that described the Hungarian political system as "a hybrid regime with parliamentary autocracy." Unless Sweden revokes this attitude, Budapest says, it will not allow it to join NATO.

Author Bio:
This article was produced by Globetrotter

Vijay Prashad is an Indian historian, editor, and journalist. He is a writing fellow and chief correspondent at Globetrotter. He is an editor of LeftWord Books and the director of Tricontinental: Institute for Social Research. He is a senior non-resident fellow at Chongyang Institute for Financial Studies, Renmin University of

China. He has written more than 20 books, including *The Darker Nations* and *The Poorer Nations*. His latest books are *Struggle Makes Us Human: Learning from Movements for Socialism* and (with Noam Chomsky) *The Withdrawal: Iraq, Libya, Afghanistan, and the Fragility of U.S. Power*
Source: Globetrotter

Where Are The World's Water Stresses?

John P. Ruehl

Around the world, significant issues are negatively impacting water security. While the situation appears dire, cooperation initiatives show some signs of relief.

In May 2023, the Arizona Department of Water Resources imposed restrictions on the construction of new housing in the Phoenix area, citing a lack of groundwater. The decision aims to slow population growth in one of the fastest-growing regions in the U.S. and underlines the dwindling water resources in the drought-stricken southwest.

As water levels in the Colorado River have declined, the states dependent on it (Arizona, California, Colorado, New Mexico, Nevada, Utah, and Wyoming) are increasingly at odds over how to distribute the declining supply.

The U.S. is not alone in contentious domestic debate over water supplies. Australian states have constantly quarreled over water rights across the Murray-Darling Basin. Disruptions to water supply or perceived misuse can cause immediate social unrest, and countries like Iran and France have seen violent protests regarding water recently.

Constant and affordable access to fresh water is recognized as a basic human

right by the UN. And in addition to providing a foundation for life, fresh water is also crucial for industry and manufacturing, energy production, agriculture, sanitation, and other essential societal functions.

But around the world, its availability is threatened. Desertification, climate change, man-made water diversion, dam building, pollution, and overuse have seen rivers, lakes, and aquifers dry up. Since 2000, the world has added almost 2 billion people, putting further strain on global water infrastructure and supplies.

Poor water management and infrastructure also play a major role in water scarcity around the world. In Iraq, up to 14.5 percent of the country's water is lost to evaporation and two-thirds of its treated water is lost due to leaks and poor infrastructure. Up to 25 to 30 percentof South Africa's water is lost to leaks, while even in many industrialized countries, up to 15 to 20 percent of water supply is lost.

Inequality can also exacerbate water stress. Amid Cape Town's water shortages in recent years, 14 percent of the population has been found to be responsible for more than half of the freshwater use in the city. Across Africa, one in three people already faces water scarcity, where "the availability of natural hygienic water falls below 1,000 m3 per person per year."

On top of government control of water supply and infrastructure, multinational companies like Nestlé S.A., PepsiCo, Inc., the Coca-Cola Company, and the Wonderful Company LLC play a huge role in the global water industry. In 2013, former Nestlé CEO Peter Brabeck-Letmathe was forced to backtrack after a 2005 interview resurfaced where he stated it was "extreme" that water was considered a human right.

However, water privatization has increased significantly over the last few decades. In 2020, Wall Street allowed water to begin trading as a commodity, and today, "farmers, hedge funds and municipalities alike are now able to hedge against—or bet on—future water availability in California." Monetization has even seen countries like Fiji, the world's 4th-largest water exporter in 2021, face water supply shortages over the last few years.

Tap water remains drinkable only in certain countries, but fears of contamination can occur rapidly and incite alarm. After thousands of gallons of a synthetic latex product spilled into the Delaware River in 2023, Philadelphia authorities shut

down a nearby water treatment plant. While it was ultimately deemed that tap water was still safe to drink, government warnings and alarm on social media led to panic-buying of water.

Contamination can also lead to longer-term damage to public faith in water infrastructure. After heightened levels of lead were found in Flint, Michigan's drinking water in 2014 (together with the tepid government response), the local population remained hesitant to resume drinking it even after it had been declared safe.

Water security also has a major impact on relations between countries. The U.S. and Mexico have historically competed over water rights to both the Colorado River and the Rio Grande. Strong population growth on both sides of the border in recent decades, coupled with drought, has exacerbated bilateral tensions.

In 2020, tension over Mexico's inability to meet its annual water delivery obligations to the U.S. from the Rio Grande, laid out in the 1944 Water Treaty, saw farmers in northern Mexico take over La Boquilla Dam, weeks before the deadline. While the crisis was eventually resolved, the fundamental issue of strained water flows remains ongoing.

Iraq has meanwhile increasingly accused Iran of withholding water from tributaries that feed into the Tigris and Euphrates Rivers, with Iran accusing Iraq of failing to use water responsibly. Iraq and Syria have also disputed Turkey's construction of dams and irrigation systems that have hindered the traditional flows of the Tigris and Euphrates rivers.

Relations between Egypt, Sudan, and Ethiopia have similarly deteriorated since the latter began construction of the Grand Ethiopian Renaissance Dam (GERD) in 2011. The project has aggravated regional fears over Nile River water shortages, and though outright conflict has so far been avoided, it has inflamed concern over supply in Sudan, which saw deadly clashes over water shortages in 2023.

China has been labeled an "upstream superpower" because several major rivers begin in China. The construction of dams and hydropower plants on the Mekong River has caused friction with Laos, Thailand, Cambodia, and Vietnam, while Kazakhstan and China have often disagreed over water rights regarding the Ili River.

Fears have also arisen that India and China, the world's two most populous countries, could come into conflict over the Brahmaputra River and Indus River. But India and downstream Pakistan have their own disputes over rights in the Indus River basin that have raised regional concern.

Other countries have weaponized water as part of a wider conflict. Ukraine and Russia have both used water to harass each other since the first round of unrest between them began in 2014. Ukraine almost immediately cut off Crimea from water supply from the North Crimean Canal, shrinking the peninsula's arable land from 130,000 hectares in 2013 to just 14,000 in 2017.

Russia reopened the canal following the start of the war in Ukraine in 2022. Additionally, Russian forces have since been accused of withholding water to some Ukrainian regions, deliberately flooding others, and targeting Ukraine's water infrastructure. Both Russia and Ukraine accused one another of blowing up the Kakhovka Dam and hydroelectric power station located on the Dnieper River on June 5, 2023, which flooded downstream communities.

The Islamic State (IS) was meanwhile instrumental in causing water shortages during its rise across Syria and Iraq a decade ago, by polluting and cutting off water supplies and flooding regions. The Taliban also repeatedly attacked water infrastructure in Afghanistan throughout the U.S.-led occupation of the country.

Longstanding disputes between the Taliban and Iran over access to the Helmand River also resulted in deadly clashes at their mutual border in 2023. And in recent years, cyberattacks have increasingly targeted the vulnerable water infrastructure of the U.S.

Thankfully, the future of water stress may be less dire than feared. Global population growth has slowed significantly over the last few decades and the population is expected to peak by the end of the century. Furthermore, regions experiencing water stresses are typically not high-population growth areas. The global community is also taking renewed steps to address global water security, with the UN holding in 2023 its first summit on water since 1977.

And even countries with longstanding disputes have recognized the importance of maintaining water supplies. The 60-year-old Indus Water Treaty between India and Pakistan has largely held despite persistent tensions between them. China has initiated cooperation with downstream states on transportation and water

flows, including the Lancang-Mekong River Dialogue and Cooperation forum to share data and prepare for shortages and flooding.

There have also been recent breakthroughs regarding the GERD. Sudan's de facto leader, Abdel-Fattah Burhan, recently came out in support of the dam, noting it could help regulate flooding. Greater cooperation between Ethiopia and Egypt could see less water evaporate from Egypt's Aswan High Dam if it can be stored in the GERD during warmer months.

And though seawater desalination remains expensive and energy-intensive, it is becoming more efficient and widespread. In Saudi Arabia, 50 percent of the country's water needs are met by desalination, while Egypt plans to open dozens of new desalination plants in the coming years. Currently, 70 percent of the world's desalination plants are found in the Middle East.

Domestic U.S. initiatives are also promising. California's Orange County recycles almost all of its waste water back to the nearby aquifer through the world's largest water reclamation plant, which opened in 2008. Arizona, California, and Nevada also agreed in May 2023 to reduce water intake by 10 percent over the next three years, and Arizona's decision to suspend housing construction may mark the beginning of more restraint over domestic water consumption.

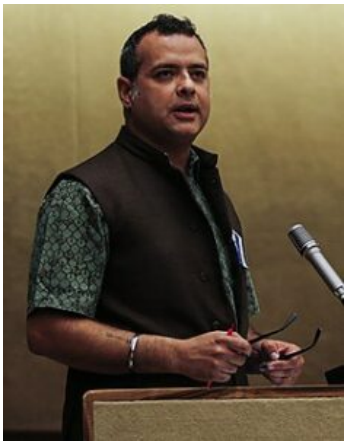
Ongoing domestic and international cooperation will nonetheless be required to resolve water disputes and create sustainable water management practices. Preventing the use of water as geopolitical leverage or a tool of war, coupled with effective management of climate change and pollution, will be integral to avoiding wars over water in the future.

Author Bio:
This article was produced by Globetrotter

John P. Ruehl is an Australian-American journalist living in Washington, D.C. He is a contributing editor to Strategic Policy and a contributor to several other foreign affairs publications. His book, *Budget Superpower: How Russia Challenges the West With an Economy Smaller Than Texas'*, was published in December 2022.

Source: Globetrotter

Can China And The United States Establish Mutual Respect To Lessen Tensions?



Vijay Prashad

On June 3, 2023, naval vessels from the United States and Canada conducted a joint military exercise in the South China Sea. A Chinese warship (LY 132) overtook the U.S. guided-missile destroyer (USS Chung-Hoon) and speeded across its path. The U.S. Indo-Pacific Command released a statement saying that the Chinese ship "executed maneuvers in an unsafe manner." The spokesperson from China's Ministry of Foreign Affairs, Wang Wenbin, responded that the United States "made provocations first and China responded," and that the "actions taken by the Chinese military are completely justified, lawful, safe, and professional." This incident is one of many in these waters, where the United States conducts what it calls Freedom of Navigation (FON) exercises. These FON actions are given legitimacy by Article 87(1)(a) of the 1982 United Nations Convention on the Laws of the Sea. China is a signatory to the Convention, but the United States has refused to ratify it. U.S. warships use the FON argument without legal rights or any United Nations Security Council authorization. The U.S. Freedom of Navigation Program was set up in 1979, before the Convention and separate from it.

Hours after this encounter in the South China Sea, U.S. Defense Secretary Lloyd Austin spoke at the Shangri-La Dialogue in Singapore. The Shangri-La Dialogue, which has taken place annually at the Shangri-La Hotel since 2002, brings together military chiefs from around Asia with guests from countries such as the United States. At a press gaggle, Austin was asked about the recent incident. He called upon the Chinese government "to reign in that kind of conduct because I think accidents can happen that could cause things to spiral out of control." That the incident took place because a U.S. and Canadian military exercise took place adjacent to Chinese territorial waters did not evoke any comment from Austin. He emphasized the role of the United States to ensure that any country can "sail the seas and fly the skies in international space."

Austin's pretense of innocence was challenged by his Chinese counterpart, Defense Minister Li Shangfu. "Why did all these incidents happen in areas near China," Li asked, "not in areas near other countries?" "The best way to prevent this from happening is that military vessels and aircraft not come close to our waters and airspace… Watch out for your own territorial waters and airspace, then there will not be any problems." Li contested the idea that the U.S. navy and air force are merely conducting FON exercises. "They are not here for innocent passage," he said. "They are here for provocation."

Tighten the Net

When Austin was not talking to the press, he was busy in Singapore strengthening U.S. military alliances whose purpose is to tighten the net around China. He held two important meetings, the first a U.S.-Japan-Australia trilateral meeting and the second a meeting that included their counterpart from the Philippines. After the trilateral meeting, the ministers released a sharp statement that used words ("destabilizing" and "coercive") that raised the temperature against China. Bringing in the Philippines to this dialogue, the U.S. egged on new military cooperation among Canberra, Manila, and Tokyo. This builds on the Japan-Philippines military agreement signed in Tokyo in February 2023, which has Japan pledging funds to the Philippines and the latter allowing the Japanese military to conduct drills in its islands and waters. It also draws on the Australia-Japan military alliance signed in October 2022, which—while it does not mention China—is focused on the "free and open Indo-Pacific," a U.S. military phrase that is often used in the context of the FON exercises in and near Chinese waters.

Over the course of the past two decades, the United States has built a series of

military alliances against China. The earliest of these alliances is the Quad, set up in 2008 and then revived after a renewed interest from India, in November 2017. The four powers in the Quad are Australia, India, Japan, and the United States. In 2018, the United States military renamed its Pacific Command (set up in 1947) to Indo-Pacific Command and developed an Indo-Pacific Strategy, whose main focus was on China. One of the reasons to rename the process was to draw India into the structure being built by the United States, emphasizing the India-China tensions around the Line of Actual Control. The document shows how the U.S. has attempted to inflame all conflicts in the region—some small, others large—and put itself forward as the defender of all Asian powers against the "bullying of neighbors." Finding solutions to these disagreements is not on the agenda. The emphasis of the Indo-Pacific Strategy is for the U.S. to force China to subordinate itself to a new global alliance against it.

Mutual Respect

During the press gaggle in Singapore, Austin suggested that the Chinese government "should be interested in freedom of navigation as well because without that, I mean, it would affect them." China is a major commercial power, he said, and "if there are no laws, if there are no rules, things will break down for them very quickly as well."

China's Defense Minister Li was very clear that his government was open to a dialogue with the United States, and he worried as well about the "breakdown" of communications between the major powers. However, Li put forward an important precondition for the dialogue. "Mutual respect," he said, "should be the foundation of our communications." Up to now, there is little evidence—even less in Singapore despite Austin's jovial attitude—of respect from the United States for the sovereignty of China. The language from Washington gets more and more acrid, even when it pretends to be sweet.

Author Bio:

This article was produced by Globetrotter.

Vijay Prashad is an Indian historian, editor, and journalist. He is a writing fellow and chief correspondent at Globetrotter. He is an editor of LeftWord Books and the director of Tricontinental: Institute for Social Research. He is a senior non-resident fellow at Chongyang Institute for Financial Studies, Renmin University of China. He has written more than 20 books, including *The Darker Nations* and *The*

Poorer Nations. His latest books are *Struggle Makes Us Human: Learning from Movements for Socialism* and (with Noam Chomsky) *The Withdrawal: Iraq, Libya, Afghanistan, and the Fragility of U.S. Power*

Source: Globetrotter

Chomsky And Pollin: Just Transition Can Stop Earth From Becoming Uninhabitable

Noam Chomsky

We must act now to heed the UN secretary-general's warning that climate change is "making our planet uninhabitable."

Climate change is "making our planet uninhabitable," said UN Secretary-General António Guterres in late March. Indeed, the threats of the impending climate crisis have become very tangible, and the world's top scientists are warning that the Earth is likely to pass a dangerous temperature threshold very soon unless we act now. Nonetheless, the gap between what is happening to the planet and what is needed in terms of climate action is growing rather than decreasing because, as Noam Chomsky points out in the joint interview with Robert Pollin that follows, "this is how the system works," unless collective action forces those in power to change course. Moreover, it is becoming increasingly evident that a just transition is pivotal to transformative climate action for workers, communities, and all

regions of the world. Pollin shows what a just transition entails and why it is so important.

Robert Pollin

Noam Chomsky is institute professor emeritus in the Department of Linguistics and Philosophy at MIT and laureate professor of linguistics and Agnese Nelms Haury Chair in the Program in Environment and Social Justice at the University of Arizona. One of the world's most cited scholars and a public intellectual regarded by millions of people as a national and international treasure, Chomsky has published more than 150 books in linguistics, political and social thought, political economy, media studies, U.S. foreign policy, and world affairs. His latest books are *Illegitimate Authority*: *Facing the Challenges of Our Time* (with C. J. Polychroniou; Haymarket Books, 2023); *The Secrets of Words* (with Andrew Moro; MIT Press, 2022); *The Withdrawal*: *Iraq, Libya, Afghanistan, and the Fragility of U.S. Power*(with Vijay Prashad; The New Press, 2022); and *The Precipice*: *Neoliberalism, the Pandemic, and the Urgent Need for Social Change* (with C. J. Polychroniou; Haymarket Books, 2021).

Robert Pollin is distinguished professor of economics and co-director of the Political Economy Research Institute at the University of Massachusetts Amherst. One of the world's leading progressive economists, Pollin has published scores of books and academic articles on jobs and macroeconomics, labor markets, wages and poverty, and environmental and energy economics. He was selected by *Foreign Policy* Magazine as one of the 100 "Leading Global Thinkers for 2013." Chomsky and Pollin are coauthors of *Climate Crisis and the Global Green New Deal*: *The Political Economy of Saving the Planet* (with C. J. Polychroniou: Verso 2020) and are now working together on a new book on the climate emergency.

C. J. Polychroniou: Noam, it has been clear for decades that human activities are

having a huge impact on the physical environment in many critical ways, and that we are the cause of global warming, with the burning of fossil fuels accounting for nearly 90 percent of all carbon dioxide (CO2) emissions. It is true, of course, that some concrete actions have been taken over the past three decades or so to stop environmental degradation and reduce carbon emissions, but the gap between what is happening to the planet, which includes a sharp decline in biodiversity, and what is needed in terms of environmental and climate action seems to be growing rather than decreasing. Indeed, one could even argue that our handling of the climate crisis is flawed as evidenced by the growing emphasis on carbon capture technologies rather than doing away with fossil fuels. Another revealing example of governments constantly advancing highly incomplete courses of action with regard to climate change is the adoption of a historic new law from governments across the European Union today toward deforestation. European governments have agreed to ban the import of goods linked to deforestation, but the new deforestation law does not oblige European banks or investors to stop funding deforestation. So, if it is the link between policy making and economic interests that prevents us from implementing fully comprehensive strategies to stop environmental destruction and prevent global warming from becoming worse, what ways are there out of this conundrum?

Noam Chomsky: Two years ago, John Kerry, Biden's special envoy on climate, reported that he'd been **"**told by scientists that 50% of the reductions we have to make (to get to near zero emissions) by 2050 or 2045 are going to come from technologies we don't yet have."

While intended to strike a note of optimism, this forecast was perhaps a little less than reassuring.

A few months later, as U.S. representative at the COP27 Glasgow international conference on climate, Kerry was still more optimistic. He reported exuberantly that now the market is on our side, as asset managers pledge tens of trillions of dollars to overcoming the impending catastrophe.

A qualification was noted by political economist Adam Tooze: The pledge holds as long as the investments are profitable and "de-risked" by guarantees from the World Bank and International Monetary Fund.

The "technologies we don't yet have" remain technologies we don't yet have or

can realistically envision. Some progress has been reported, but it is very far from what would be required to deal with the impending crisis.

The present danger is that what must be done to eliminate fossil fuel use is being set aside on the pretext that some remote technological breakthrough will ride to the rescue. Meanwhile we can continue to burn up the Earth and pour even more cash into the bulging profits of the fossil fuel industry, now so overflowing that they don't know what to do with their incredible riches.

The industry of course welcomes the pretext. It might even spare some cash for carbon capture — maybe as much as a rounding error for their accountants — as long as the usual qualification holds: funded by the friendly taxpayer and de-risked. Meanwhile more federal lands are opened up for fossil fuel production, more gifts are provided to them like the 300-mile long Mountain Valley Pipeline – Manchin's condition for not tanking the global economy — and other such amenities.

In the background of the euphoria about asset managers and technological miracles lies the Stimson Doctrine, enunciated by Secretary of War Henry Stimson 80 years ago as he was overseeing the huge mobilization for war: "If you are going to try to go to war, or to prepare for war, in a capitalist country, you have got to let business make money out of the process or business won't work."

That's how the system works — as long as we let it.

In the early stages of the war, business was reluctant to accept the bargain. Most hated the reformist New Deal and did not want to cooperate with a government not entirely devoted to their interests. But when the spigot was opened, such reservations disappeared. The government poured huge resources into war production. Keeping to the Stimson Doctrine, policies were structured to ensure great profits for business contractors. That laid the basis for what was much later criticized as the military-industrial complex but might more accurately be described as the not-so-hidden system of U.S. industrial policy, the device by which the public funds the emerging high-tech economy: A highly inefficient system, as elaborated by Seymour Melman and others, but an easy way to gain congressional approval for what approved rhetoric calls a marvelous system of free enterprise that helps the munificent "job creators" labor day and night for the benefit of all.

Eisenhower apparently at first wanted to use the term "military-industrial-congressional complex." That would have been appropriate. Why does Congress go along? One major reason is provided by political economist Thomas Ferguson's well-confirmed "investment theory of politics." In a current updating, once again corroborating the theory, he summarizes the crucial conclusion simply:
'The dominating fact about American politics is its money-driven character. In our world, both major political parties are first of all bank accounts, which have to be filled for anything to happen. Voters can drive politics, but not easily. Unless they are prepared to invest very substantial time and effort into making the system work or organizations that they control will – such as unions or genuine grassroots political organizations – only political appeals that can be financed go live in the system, unless (of course) as helpful diversions.'

That insight into "our world" also offers advice as to ways out of the conundrum. And also, ways to confront the reigning Stimson Doctrine, which is a virtual epitaph for the human species in the context of the awesome and imminent threat of heating the earth beyond the level of recovery.

It is suicidal to look away from the gap between what is happening to the planet, which includes a sharp decline in biodiversity, and what is needed in terms of environmental and climate action seems to be growing rather than decreasing. When we do look, we find a mixed picture.

One critical case is the Amazon Forest. Its central role in global ecology is well understood. It is self-sustaining, but if damaged can shift rapidly to irreversible decline, with catastrophic effects for the region, and the entire world.

During Bolsonaro's term in Brazil, agribusiness, mining and logging enterprises were unleashed in an assault on the forest and the Indigenous societies that have long lived there in harmony with nature. To take just one measure, "Deforestation across Brazil soared between 2019 and 2022 under the then president, Jair Bolsonaro, with cattle ranching being the number one cause." More than 800 million trees were destroyed for beef export. The main researchers, the Indigenous peoples expert Bruno Pereira and his journalist collaborator Dom Phillips, were murdered while conducting their work in the Amazon.

Brazilian scientists report that some sectors of the forest have already passed the tipping point, transitioning to savannah, permanent destruction.

Lula's election in 2022 offered hope to limit, perhaps end, the destruction. As minister of the environment, he appointed Marina Silva, a courageous and dedicated environmentalist, with a truly impressive record. But "the masters of mankind" who own the economy (in Adam Smith's phrase) never rest. Their congressional supporters are chipping away at Silva's jurisdiction.

Those who hope to save the world are not resting either. Brazilian ecologists are seeking ways to support Indigenous communities that have been the guardians of the forest, and to extend their reach.

The struggle continues.

It continues on other fronts as well. Some good news from China is summarized in the *Washington Post*. Reviewing many studies, the *Post* reports that China is far in the lead globally in "churn[ing] out batteries, solar panels and other key ingredients of the energy transition" as China has "moved aggressively on renewables," leaving the U.S. far behind — very far behind in per capita terms, the relevant figure. China is "likely on track to meet its goals of peaking its emissions before 2030 and achieving net-zero emissions by 2060. It installed a record amount of solar power capacity last year — and this year alone is set to install more than the entire existing solar capacity of the United States."

I've been mispresenting the article, however. The *Post* does not come to praise China, but to condemn it. Its praise is for the U.S., which, from its lofty perch on transitioning to renewable energy is seeking ways "to pressure China to help avert climate catastrophe" — the headline of the article. The article warns ominously that China is responsible for more than double U.S. emissions; or to translate from Newspeak, China is far behind the U.S. in per capita emissions, again the relevant figure.

The article discusses the means under consideration to induce China to join us in our noble pursuit of saving the climate, omitting, however, the most important of these: "Commerce Secretary Gina Raimondo said Tuesday that the U.S. will rally allies in order to mount pressure on the world's second-largest economy. 'If we really want to slow down China's rate of innovation, we need to work with Europe,' Raimondo said."

We have to make sure to contain China's innovations in producing the advanced technology that might save the world. The prime method, openly announced and

highly praised, is to deny China access to the computer chips that are necessary for advanced technology.

At the same time, Raimondo warned China that the U.S. "'won't tolerate' China's effective ban on purchases of [Idaho corporation] Micron Technology memory chips and is working closely with allies to address such 'economic coercion'."

More insight into the famed "rules-based international order" and its subtle design, as the world burns.

Polychroniou: India has overtaken China as the world's most populous country, and its population is certain to continue to grow in the decades ahead. Do we have to reduce global population to save the planet?

Chomsky: The global population should be reduced, perhaps considerably. Fortunately, there is a method to achieve this result, one that is furthermore humane and should be undertaken irrespective of the goal of saving the planet: education of women. That's been shown to lead to sharp population reduction in both rich countries and poor.

Education of women should be supplemented by other humane methods, such as those prescribed in the 1948 Universal Declaration of Human Rights: "Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection."

The Universal Declaration of Human Rights was initiated by the U.S., but that was in a different era, when New Deal social democracy still had not been undermined by the bitter business assault that finally reached its goals with Reagan. By then, the socioeconomic provisions of the declaration, including the ones just quoted, were ridiculed as "a letter to Santa Claus" (Reagan's UN Ambassador Jeane Kirkpatrick). Kirkpatrick was echoed by Paula Dobriansky, the official in charge of human rights and humanitarian affairs in the Reagan and Bush administrations. Dobriansky sought to dispel "the myth [that] 'economic and social rights' [of the declaration] constitute human rights." These myths are "little more than an empty vessel into which vague hopes and inchoate expectations can be poured." They are "preposterous" and even a "dangerous incitement," in the words of Bush ambassador Morris Abram when he was casting the sole vote against the UN Right to Development, which closely paraphrased the socioeconomic provisions of

the Universal Declaration of Human Rights.

By then dismissal of the letter to Santa Claus had become largely bipartisan, though the GOP has maintained the lead in savagery, as we can see right now in the farcical doings in Congress.

There is a lot more to say about this, but for another time.

Polychroniou: Bob, a "just transition" is seen as essential for advancing ambitious climate change policies. Why is a "just transition" so crucial for effective climate action, and how exactly does it affect average citizens?

Robert Pollin: The term "just transition" has been used in various ways. I will first use it to refer to measures to support workers and communities that are presently dependent on the fossil fuel industry for their incomes and well-being. I will then consider below a second use of the term, considering the ways in which high-income economies need to support the Green New Deal programs advanced by low-income economies.

With respect to the first issue of supporting workers and communities that are now dependent on the fossil fuel industry, the broader context is very important. As we have discussed many times before, investments in energy efficiency and renewable energy to build a global zero-emissions energy infrastructure will be a major engine of overall job creation. That is, overall, saving the planet is very good for jobs. This is, of course, the opposite of the fulminations we hear from likes of Donald Trump, but also much more widely across the political spectrum. The vaguely respectable version of this position is that phasing out fossil fuel consumption might well be beneficial on environmental grounds, but it still going to be a job killer. And everyone other than rich coastal elites care more about jobs than the environment.

Here is how this position can actually resonate. While the clean energy transition is indeed a major engine of job creation overall, it is still also true that phasing out the fossil fuel industry will inevitably mean losses for workers and communities that now depend on the fossil fuel industry. In the absence of generous just transition policies, these workers and communities will indeed be facing layoffs, falling incomes and declining public sector budgets to support schools, health clinics and public safety. Should we be surprised that, without hard commitments to generous just transition policies, a good share of these

workers and communities will vehemently oppose the fossil fuel industry phase out?

A viable just transition program for these workers and communities needs to build from the framework first advanced by Tony Mazzocchi, the late great labor movement and environmental leader. Mazzocchi was the person who came up with the term "just transition" in the first place. In considering the phasing out of nuclear plants and related facilities, Mazzocchi wrote in 1993: "Paying people to make the transition from one kind of economy to another is not welfare. Those who work with toxic materials on a daily basis … in order to provide the world with the energy and the materials it needs deserve a helping hand to make a new start in life."

Starting from this Mazzocchi perspective, we still need to establish what specifically would constitute a generous set of just transition policies. For the workers, I would argue that, as a first principle, the aim of such policies should be simply, to truly protect them against major losses in their living standards. To accomplish this, the critical components of a just transition policy should include three types of guarantees for the workers: 1) a guaranteed new job; 2) a guaranteed level of pay with their new job that is at least comparable to their previous fossil fuel industry job; and 3) a guarantee that their pensions will remain intact regardless of whether their employers' business operations are phased out. Just transition policies should also support displaced workers in the areas of job search, retraining and relocation. These forms of support are important but should be understood as supplementary. This is because, in themselves, they are not capable of protecting workers against major losses in their living standards resulting from the fossil fuel industry phase out.

Among major high-income economies, just transition policies for workers have recently been enacted within the European Union, Germany and, to a lesser extent, the United Kingdom. Such initiatives are still mainly at the proposal stages in the U.S., Japan, Canada. But even in the cases of Germany, the U.K. and the European Union, these policies remain mostly limited to the areas of job search, retraining and relocation support. In other words, in none of these cases have policies been enacted that provide workers with the guarantees they need.

The most substantive commitments to just transition policies have been advanced by the European Union, within the framework of the European Green Deal. Thus,

Frans Timmermans, executive vice president of the European Commission, has stated that that "We must show solidarity with the most affected regions in Europe, such as coal mining regions, and others, to make sure the Green Deal gets everyone's full support and has a chance to become a reality."

In that spirit, the European Commission established a Just Transition Fund in January 2020 to advance beyond broad principles into meaningful concrete policy commitments. Nevertheless, to date, the scope of these programs and the level of funding provided are not close to adequate to achieve the goals set out by Vice President Timmerman, of "making sure the Green Deal gets everyone's full support." In particular, the categories of support for displaced workers under the Just Transition Fund are limited to skill development, retraining and job search assistance. The fund does not include any provision for the most critical areas of support for workers who will be facing displacement — that is, the guarantees with respect to reemployment, wage levels and pensions.

To obtain a sense of what a much more robust just transition program would look like, I have developed, with coworkers, illustrative programs for eight different U.S. states, for the U.S. economy overall, and, most recently, for South Korea. For now, it might be useful to focus on the case of West Virginia, since it is one of the most fossil fuel dependent state economies in the U.S. As such, West Virginia provides a highly challenging environment in which to mount a generous just transition program.

It is critical that the just transition policies for West Virginia would be one component of an overall Green New Deal program for the state. Under the overall program, fossil fuel production will fall by 50 percent as of 2030 and clean energy investments will make up the difference in the state's overall energy supply. We estimate that the clean energy investments in West Virginia will generate an average of about 25,000 jobs throughout the state through 2030.

What about the job losses from the state's fossil fuel industry phase out? There are presently roughly 40,000 people employed in West Virginia's fossil fuel industry and ancillary sectors, comprising about 5 percent of the overall West Virginia labor force. But it is critical to recognize that all 40,000 workers are *not* going to lose their jobs right away. Rather, about 20,000 jobs will be phased out by 2030 as fossil fuel production is cut by 50 percent. This averages to a bit more than 2,000 job losses per year. However, we also estimate that about 600 of the

workers holding these jobs will voluntarily retire every year. This means that the number of workers who will face job displacement every year is in the range of 1,400, or 0.2 percent of the state's labor force. This is while the state is also generating about 25,000 new jobs through its clean energy transformation.

In short, there will be an abundance of new job opportunities for the 1,400 workers facing displacement every year. We estimate that to guarantee these workers comparable pay levels and intact pensions, along with retraining, job search and relocation support, as needed, will cost about $42,000 per worker per year. This totals to an average of about $143 million per year. This is equal to about 0.2 percent of West Virginia's overall level of economic activity (GDP). In short, generous just transition policies for all displaced fossil fuel workers will *definitely not* create major cost burdens, even in such a heavily fossil fuel dependent state as West Virginia.

For the other seven U.S. states that we have examined, the costs of comparable just transition programs range between 0.001 and 0.02 percent of the state's GDP. For the U.S. economy overall, the just transition program's costs would total to about 0.015 percent of GDP — i.e. one-tenth to one-twentieth of what the West Virginia program would cost relative to the overall economy's size. In short, providing workers with robust just transition support amounts to barely a blip within the U.S. economy. It is almost certainly the case that similarly robust just transition programs in other high-income economies would generate comparable results.

Now let's consider communities' transitions. In fact, communities that are now dependent on the fossil fuel industry will face formidable challenges adjusting to the decline of the industry. At the same time, it is critical that, as I described for the case of West Virginia, the decline of the fossil fuel industry will be occurring in conjunction with the rapid expansion of the clean energy economy. This will provide a basic supportive foundation for advancing effective community transition policies.

One important example has been the integration of clean renewable energy sources— primarily wind and solar power — into Alaska's long-standing and extensive energy microgrid infrastructure. A microgrid is a localized power grid. Since the 1960s, these grids have been heavily reliant on diesel generators. But since 2005, renewable energy has become an increasingly significant alternative

to diesel fuel. As of 2015, the Alaska Center for Energy and Power described this development as follows:
'Over the past decade, investment in renewable energy generation has increased dramatically to meet a desire for energy independence and reduce the cost of delivered power. Today, more than 70 of Alaska's microgrids, which represent approximately 12 percent of renewably powered microgrids in the world, incorporate grid-scale renewable generation, including small hydro, wind, geothermal, solar and biomass.'

Another important development, primarily thus far in Australia, Germany and the U.S. is with creating pumped storage hydropower sites in now defunct coal mines. A *Wall Street Journal* article from late 2022 reports as follows:
'Mining operations that contributed to greenhouse-gas emissions could soon help to cut them. Around the world, companies are seeking to repurpose old mines as renewable-energy generators using a century-old technology known as pumped-storage hydropower. The technology, already part of the energy mix in many countries, works like a giant battery, with water and gravity as the energy source. Water is pumped uphill to a reservoir when energy supply is plentiful. It is released and flows downhill through turbines generating hydroelectric power when electricity demand is high or there are shortages of other types of power. Finally, the water is captured to be pumped uphill again in a repeated cycle. Surface and underground mines hold potential as reservoirs for the water, and could be developed with a lower environmental impact and upfront costs than building such plants from scratch, experts say.'

More broadly, there is no shortage of opportunities for revitalizing fossil fuel dependent communities through developing innovative clean energy projects in these very communities. To its credit, the Biden administration's Inflation Reduction Act — which is primarily about financing clean energy investment projects in the U.S. — is providing large-scale funding for such projects. Naturally, the congressional Republicans tried to kill such funding through the farcical and now mercifully concluded debt ceiling debate. Fortunately, they failed.

Polychroniou: If moving away from fossil fuels and toward clean energy is the only way forward for the survival of the planet, climate action must be ultimately coordinated on a global level. What does global just transition entail, and what sort of new relationships of power need to be created since the world remains

divided by huge differences between rich countries and poor countries?

Pollin: Let's first be clear that there is no such thing as a viable climate stabilization program that applies only to rich countries. All countries, at all levels of development, need to drive their emissions to zero by 2050. It is true that, at present, China, the U.S. and the European Union together account for 52 percent of all global CO2 emissions. But that also means that if, miraculously, emissions in China, the U.S. and the European Union were all to fall to zero tomorrow, we would still be only a bit more than halfway to driving global emissions to zero. Moreover, if large, fast-growing developing economies like India and Indonesia continue to power their growth through a fossil fuel-dominant energy infrastructure, we will not cut global emissions *at all* by 2050 relative to today, even if emissions in China, the U.S. and the European Union were to indeed fall to zero. The point is that every place does matter if we really are going to hit the target of zero emissions by no later than 2050.

Thus, recognizing that a Green New Deal program has to be global in scope, the worker-and-community just transitions that I have described above for high-income economies applies equally, if not more so, for low-income economies. For starters, the clean energy investment transition programs will be a major engine of job creation in low-income economies just as it is for high-income economies. For example, research that I have done with coworkers finds that creating a clean energy economy in places like India, Indonesia and South Africa will generate between two-to-three times more jobs for a given spending level than maintaining these economies' existing fossil fuel-dominant energy infrastructure. At the same time, phasing out fossil fuels in these economies will still also entail losses for fossil fuel industry dependent workers and communities. These workers and communities will require just transition support comparable to what we have described above for the U.S. and other high-income economies.

We still need to ask the question: who pays for the Green New Deal in low-income countries? As a baseline matter of planetary survival, we can start by recognizing that *somebody* has to pay. How then should we establish fair and workable standards as to who should pay, how much they should pay and via what financing channels?

Two initial points are critical. First, starting with the early phases of industrial development under capitalism, what are now the globe's high-income countries,

including the U.S., western Europe, Japan, Canada and Australia, are primarily responsible for loading up the atmosphere with greenhouse gas emissions and causing climate change. They therefore should be primarily responsible for financing the global Green New Deal. And second, moving from this historical perspective to the present, high-income people in all countries and regions have massively larger carbon footprints today than everyone else. As documented in a 2020 Oxfam study, the average carbon footprint of people in the richest 1 percent of the global population, for example, is *35 times greater* than the average emissions level for the overall global population.

Thus, by any minimal standard of fairness, high-income countries and high-income people, no matter where they live, need to cover most of the upfront costs of a global clean energy transformation. At the same time, let's also remember that these upfront costs are investments. They will pay for themselves over time, and then some, by delivering high efficiency and abundant renewable energy at average prices that are already lower today than fossil fuels and nuclear, and falling.

But it is still necessary to mobilize investment funds into low-income economies right now at both a speed and scale that are unprecedented. We are already seeing that, despite various pronouncements and pledges, private capitalists are not about to accomplish this on their own. As Noam described above, private capitalists are rather waiting for their clean energy investment prospects in developing economies to become "de-risked" by public entities. That means, to summarize Noam, that the private investors get big subsidies from public entities to undertake investments, but then pocket all the profits when the investments pay off. The public entities handing out the subsidies can include their own rich country governments, the governments of the low-income countries where they might invest, or international public investment institutions like the World Bank or International Monetary Fund.

It is also the case that the rich country governments have not been fulfilling the pledges they made initially in 2009 to provide $100 billion in annual climate-related support for poor countries. Between 2015-2020, 35 high-income countries reported providing an overall average of $36 billion per year, only one-third of the $100 billion annual pledge. Moreover, even this low-end figure overstates the actual level of climate finance rich countries are providing, given that countries can claim virtually anything as constituting "climate finance." Thus, according to

a *Reuters* story from June 1, 2023:
'Italy helped a retailer open chocolate and gelato stores across Asia. The United States offered a loan for a coastal hotel expansion in Haiti. Belgium backed the film *La Tierra Roja*, a love story set in the Argentine rainforest. And Japan is financing a new coal plant in Bangladesh and an airport expansion in Egypt.…

Although a coal plant, a hotel, chocolate stores, a movie and an airport expansion don't seem like efforts to combat global warming, nothing prevented the governments that funded them from reporting them as such to the United Nations and counting them toward their giving total.'

It's obvious that a serious system of monitoring is one necessary step toward moving significant financial resources into legitimate climate projects in developing economies. But in addition, it will also be critical that public investment banks in low-income countries serve as primary conduits in moving specific investment projects forward in their economies. The public investment banks should be managing the financing of clean energy projects in both the public and private sectors, along with mixed public/private projects. We cannot know what the best mix should be between public and private ownership with any specific project in any given low-income country (or for that matter, any high-income country). There is no point in being dogmatic and pretending otherwise. But, in all situations, we need to operate under the recognition that it is not reasonable to allow private firms to profit at rates that they have gotten away with under 40 years of neoliberalism. If private firms are happy to accept large public subsidies to support their clean energy investments, they then also need to be willing to accept limits on their profitability. Such regulatory principles are, for example, routine in the private U.S. electric utility sector. Similar standards can be easily established in all regions of the globe.

C.J. Polychroniou is a political scientist/political economist, author, and journalist who has taught and worked in numerous universities and research centers in Europe and the United States. Currently, his main research interests are in U.S. politics and the political economy of the United States, European economic integration, globalization, climate change and environmental economics, and the deconstruction of neoliberalism's politico-economic project. He is a regular contributor to *Truthout* as well as a member of *Truthout's* Public Intellectual

Project. He has published scores of books and over 1,000 articles which have appeared in a variety of journals, magazines, newspapers and popular news websites. Many of his publications have been translated into a multitude of different languages, including Arabic, Chinese, Croatian, Dutch, French, German, Greek, Italian, Japanese, Portuguese, Russian, Spanish and Turkish. His latest books are *Optimism Over Despair*: *Noam Chomsky On Capitalism, Empire, and Social Change* (2017); *Climate Crisis and the Global Green New Deal*: *The Political Economy of Saving the Planet* (with Noam Chomsky and Robert Pollin as primary authors, 2020); *The Precipice*: *Neoliberalism, the Pandemic, and the Urgent Need for Radical Change* (an anthology of interviews with Noam Chomsky, 2021); and *Economics and the Left*: *Interviews with Progressive Economists* (2021).