SDG ACTION

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Looking for leadership

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Looking for leadership

Indifference and hostility have created a leadership vacuum in development. But as practitioners do the best they can in challenging circumstances, they create their own forms of thought leadership

By Fred Carver, Consulting Editor, SDG Action

The story of the Sustainable Development Goals (SDGs) should be ending about now, but I'm not sure it will ever really end. The idea was always that they would set a path toward a stronger, fairer, more sustainable world by 2030. At this stage we should just be ticking off the last few bits of unfinished business.

Progress absolutely has been made, and I'm thrilled that this publication showcases so much of it. But the idea of the SDGs as an agenda that will bring cohesion to global development efforts, not least because it was universally accepted, is fading. And yet with seemingly little interest in any kind of negotiation to replace the SDGs beginning until the age of Trump is behind us – if then – it may continue to be the platform that sets such direction as can be set for some time to come.

That direction is still largely unchanged and still broadly correct. But this is an agenda that was designed to be palatable to the forces of 2015 and also to contain within it the possibility for more dynamic action. Those forces are different now, and the appetite for greater ambition is lower.

The west has pivoted away from a development agenda, but neither the Global South, nor the middle powers, nor any would-be replacement hegemons, nor the uncomfortable amalgamation of all those things that is the BRICS has really stepped into the gap.

▼ Women in Bangladesh farming edible crabs that can tolerate rising salinity. They are part of the wider gender-responsive coastal adaptation initiative that is empowering women to create resilient livelihoods

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A weakened sense of direction

Where do we go when we have such a weak sense of where we're going? As Sheela Patel demonstrates in Why markets alone cannot solve the affordable housing crisis, markets can do much but they cannot do it intentionally, leaving gaps that require leadership to fill.

We see its absence in various ways. Emi Gui shows us in Science-based policymaking – bridging the gulf between promise and reality that even though the science is pretty clear, clear science does not lead to clear policy. Kate Levick and others make a compelling case for why climate action needs to be understood in terms of economic risk management – and yet it isn't.

Meanwhile our leaders have been busy looting and slaughtering. The result, as Bineta Diop notes in Building the infrastructure for peace, is that peace agreements frequently do not lead to peace, while the humanitarian and conflict nexus remains as intractable as ever – although Asya Varbanova powerfully articulates in Empowering women during humanitarian crises gender can help to calibrate a reset.

If that picture feels bleak, it shouldn't. The strength and diversity of work that continues to be undertaken, and the impact it has, is remarkable. But it is important to acknowledge and navigate the strong political headwinds such efforts must battle.

Self-interest or redistribution?

Opinions differ as to how best to do this, and there's probably something to be said for a diversity of approaches. On the one hand: in a world of increasing hostility toward development from both donors and recipients it is increasingly tempting to reframe development as a matter of mutual self-interest. This offers the opportunity not only to increase the political palatability of development but also to hold a conversation about power and control: who directs development and in whose interests. While the short-term consequences of the west's retreat from development have been severe, it does create a greater space for efforts to be truly led by and for polities in the Global South – something we have yet to meaningfully see.

Yet at the same time, as Adriana Abdenur reminds us, inequality is the defining challenge of our time. Tobias Schillings confirms this for health, in Coverage is not enough: why universal health coverage must tackle inequality. Indeed, inequality is the reason development is required in the first place. Thus, development must have a redistributive, maybe even a reparatory, element: if it does not result in wealth transfers from rich to poor both within, and critically between, states, then it does not meaningfully alter the world's economy. At best it just accelerates the economy we have, inequalities and all. One can argue about the extent to which traditional development was ever truly redistributive of wealth. But if redistribution is not even an aspiration of the system that replaces it, there will be a low limit on the change it can bring.

There is an understandable caution around talking in such terms given the political climate. But there is a perhaps greater risk if, in an attempt to avoid censure in this polarized age, we use vague language to paper over meaningful, substantive political differences. As Phoebe Koundouri and others remind us in Is the European Green Deal's vision still intact?, a strategy which tries to be all things to all people will ultimately end up satisfying none. Uncomfortable as the process may be, leadership in development – particularly given the challenging politics and the fact we are reaching the end of our roadmap – requires making difficult choices, not denying that we must.

There are several potential framings that are helpful here, although none will provide for all the answers. In Stopping polarization from destroying democracy, Jennifer McCoy suggests inspiring a politics that would generate such leadership through the framework of "targeted universalism." Likewise, Molly Sharone and Isabel Hagbrink argue powerfully for the articulation of climate technology as a justice issue.

Who might step up?

Who could show that kind of leadership? Could it come from our much bruised but still standing multilateral system, particularly under a new Secretary-General, as Richard Gowan (in Can the UN still make peace?) and María Espinosa (in Why the UN needs women's leadership) discuss? It's not impossible, but it certainly cannot be taken for granted. States agree on candidates through a process that requires broad acceptability, as well as the approval of the five permanent members of the Security Council. That process has historically sided against, but not entirely prevented, such voices from emerging.

> ***"This is an agenda that was designed to be palatable to the forces of 2015 and also to contain within it the possibility for more dynamic action. Those forces are different now, and the appetite for greater ambition is lower***

But as we wait to see who, if anyone, emerges from this process, and while we observe the vacuum of global political leadership and ambition, the articles in this publication stand in testament to the fact that practitioners can and will continue to deliver change against the odds. This type of thought leadership is creating a coherent, scientific foundation for true sustainable development. It also provides such direction as is to be provided until such time as political interest in a sustainable future is revived. And when it is, it will provide the framework for success. ■

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Can the UN still make peace?

With the Security Council divided and the UN's wider credibility under strain, member states are looking to the next Secretary-General for a fresh vision of peacemaking. But what can one leader realistically do to restore the organization's influence on peace and security?

By Richard Gowan, Program Director, Global Issues and Institutions, International Crisis Group

When US President Donald Trump visited the United Nations for the annual high-level meeting of the General Assembly in September 2025, he wrote off the UN as irrelevant to international peace and security. In the days that followed, my colleagues and I at the International Crisis Group had the opportunity to ask politicians and officials from around the world what they thought of the President's views. Without exception, everyone agreed that the UN is failing to fulfill its primary Charter commitment to "save succeeding generations from the scourge of war."

The need for the UN to regain credibility on peace and security is now feeding into discussions of who should replace António Guterres as UN Secretary-General in 2027. While Guterres has pioneered international cooperation on issues such as artificial intelligence, most UN members feel he has not invested enough energy in conflict prevention and resolution during his decade in office. His achievement in helping forge the Black Sea Grain Initiative in 2022, which reduced the impact of Russia's all-out war on Ukraine on global food markets, stands out as his one major success as a mediator.

Diplomats and UN officials acknowledge that whoever follows Guterres will need to juggle issues ranging from climate change to the future of development. Most agree that he or she will need to offer a new vision of what the UN can contribute to peacemaking. That is not only because the world is a dangerous place, but also because a Secretary-General who carries weight on matters of peace and war is more likely to have influence on world leaders on other policy areas.

Why the UN looks weaker on war and peace

The UN's position as a peace organization has looked increasingly precarious this year. The US has made a significant contribution to this downward cycle, both by ignoring the UN Charter in its attacks on Venezuela and Iran, and by floating President Trump's Board

◂ Thousands of Palestinian families walk through devastated infrastructure, returning home to northern Gaza

of Peace – initially a UN-endorsed mechanism to oversee Gaza – as an alternative global peacemaking forum. In parallel, the Security Council and the General Assembly have been unable to make concrete efforts to end wars, from Sudan to Ukraine and Myanmar. Diplomats and international officials in New York are frankly despondent about the world organization's ability to make or keep peace.

This is not because the UN has nothing to do. For all the talk of its decline, the UN oversees 60,000 peacekeepers and more than a dozen sanctions regimes worldwide. The Trump administration has also set aside its aversion to multilateralism to ask the UN for help stabilizing Haiti, where a new UN logistics mission will support anti-gang operations. Having slashed funding for relief efforts in war zones, Washington has also started to work more closely with the UN Office for the Coordination of Humanitarian Affairs, acknowledging that the UN aid system has unique operational strengths.

Yet despite these continuing areas of UN activity, it is hard to deny that the organization overall is adrift, and that its ability to shape major crises continues to slip. Few expect the Security Council – which has not launched a large-scale blue-helmet peace operation since 2014 and has been profoundly split over Ukraine and Gaza – to bounce back as a lively center of decision-making in the near future. At best, it may act as an institutional channel for China, Russia, and the US to work out solutions or ease disputes over crises where their interests converge. While there is no shortage of proposals for Council reform, the current veto powers seem happy with the status quo.

Other UN forums, such as the General Assembly, do speak out regularly on some crises, but they lack both the legal authority and political cohesion to replace the Security Council as a decision-making hub. The Assembly could do more to facilitate crisis diplomacy when the Council is stuck – for example, by endorsing mediators and international investigative mechanisms – but it does not have the powers to mandate sanctions or authorize the use of force that the Council enjoys.

Even without this sort of political top cover, the UN can help foster peace in individual trouble spots. The secretariat's Peacebuilding Fund has a good reputation for supporting small projects on issues such as community reconciliation. But while this is important work, it is not on the sort of scale that seems necessary in an era of global crisis, when interstate wars and even major-power wars are increasingly real threats in many parts of the world. It is an open question whether the organization – which has seen its influence on peace and security wax and wane significantly over the decades – can stake out a credible case about why it matters in this troubled moment.

The evidence from recent UN reform efforts is mixed. In 2024, UN member states endorsed the Pact for the Future, a wide-ranging review of international cooperation, and restated their commitment to both the UN as a whole and specific tools like peace operations. But the UN80 reform process, launched by Secretary-General Guterres to streamline the organization in 2025 in response to US budget cuts, has generated very little new thinking on peace-related issues, other than tidying up a few institutional coordination issues. Senior officials from the organization's peacekeeping and political affairs departments lobbied hard against major change.

A three-part agenda for the next UN chief

Given this shortfall, it is unsurprising that UN members are asking what the next Secretary-General can put forward on peace and security. This is in some ways unfair – it is a lot to ask one individual to reverse the overall decline of international cooperation. Nonetheless, the next UN chief could take at least three steps to show that the UN can still contribute to global stability.

The first is to re-establish the Secretary-General's role as a top-level diplomatic broker, carrying messages quietly between powers and – where possible – stepping in to prevent and mediate conflicts. This means being willing to nurture relationships and take risks to bring rival powers together – and the potential for failure is always high. But previous Secretaries-General, going back to Dag Hammarskjöld and U Thant, did manage to play this role in periods of global tension.

The second step is to empower the UN secretariat to put more ideas on the table for solving conflicts, even though – as with personal diplomacy – a lot of initiatives will fail. UN officials say that the organization has become very conservative in response to recent geopolitical friction, and Security Council members complain that the quality of advice they receive from the UN system is often poor. The next Secretary-General will need to encourage international officials to table plans for dealing with specific conflicts that show the UN can bring fresh ideas to the table.

The third step the next Secretary-General must take is to craft a compelling pitch to global public opinion about why the UN's peace and security efforts matter. The organization's peacemaking work currently attracts little international attention. But in an era when people in many countries are increasingly nervous about the risks of conflict, there is still room to make the case for the UN and international cooperation.

No Secretary-General can revive the UN's fortunes as a peacemaking institution alone. States that want to see multilateralism, including small and middle powers, will need to offer their collective backing for the next UN chief's efforts. But the alternative – effectively admitting that the UN is no longer a player in international peace and security – risks weakening the institution and accepting that the international laws and rules the UN represents can no longer hold anarchy at bay. ■

Why the UN needs women's leadership

The case for a woman Secretary-General is not just about symbolism. More representative leadership would strengthen the UN's legitimacy, improve decision-making, and better equip the institution for an era of compounding global crises


© UN Photo/Nektarios Markogiannis

By María Fernanda Espinosa Garcés, President, Cities Alliance; Executive Director, GWL Voices; former President, United Nations General Assembly; former Minister of Foreign Affairs and former Minister of Defense, Ecuador

In the 80 years of its existence, the United Nations has never been led by a woman. That fact is often invoked as a symbol of unfinished progress. But symbolism is not the real issue. The question is not whether a woman Secretary-General would be historic. The question is whether it would be consequential – and, more importantly, what the costs of continued absence are.

The honest answer is: yes, it would matter, but not for the reasons most commonly stated.

> ***"The evidence consistently points toward better outcomes, across multiple domains, when women are meaningfully included in leadership and decision-making***

The UN was built to serve all of humanity. Yet evidence suggests it is still led, overwhelmingly, by one half of it. Women represent just 27.5% of parliamentarians globally, according to the Inter-Parliamentary Union (IPU). The latest figures from IPU and UN Women also show that women held just 22.9% of cabinet seats worldwide as of January 2025, down from the previous year. At the current pace, according to UN Women, equality in the highest positions of power will not be reached for another 130 years. Some 106 countries have never been led by a woman.

Within the international system, the picture is mixed. GWL Voices' report Women in Multilateralism 2026 found that 46% of the world's 62 major multilateral organizations are currently headed by a woman, a figure that would have seemed improbable a generation earlier. Yet 21 of those same institutions have never been led by a woman. The UN sits at the apex of a system in which, since 1947, only 8% of all permanent representatives to the organization have been women, according to the same study. Within the Secretariat, parity in senior management has been maintained for several years, a genuine achievement. But representation lags in field missions and, of course, at the very top.

This is not incidental. It is structural. And its consequences reach far beyond optics.

Would a woman Secretary-General automatically shift this? No – leadership does not work that way. One appointment, however significant, does not override geopolitical realities or budgetary constraints.

And there is a harder question that advocates rarely raise: women appointed to leadership in inherently conservative institutions often face strong pressure to conform, not to transform. Tokenism at the top, without structural reform beneath it, can lend legitimacy to an unchanged system rather than challenge it.

▲ Major General Cheryl Pearce (center), acting Military Advisor for the UN's Peacekeeping Operations, visits the United Nations in South Sudan (UNMISS)

These are real risks. They deserve honest engagement, not dismissal.

Beyond symbolism: what the evidence shows

The argument for greater representation of women at the UN is not that it offers a quick fix. It is that the evidence consistently points toward better outcomes, across multiple domains, when women are meaningfully included in leadership and decision-making.

Start with peace and security, the UN's foundational mandate. Between 1992 and 2019, women made up just 13% of negotiators and 6% of signatories – the people formally signing agreements – in major peace processes. In 2024, women represented only 18% of negotiators in UN-led processes, a reduction from 23% in 2020. None of the peace agreements concluded in 2023 included a woman signatory.

This matters because the evidence on outcomes is stark. Research published in the journal International Interactions, drawing on the Uppsala Conflict Data Program, found a robust correlation between peace agreements signed by women and durable peace. It also showed significantly higher rates of implementation and more substantive political reform provisions. Separate analysis found that women's participation increases the probability of a peace agreement lasting at least 15 years by 35%. When civil society groups, including women's organizations, are included, an agreement becomes 64% less likely to fail.

These are not marginal differences. They are the difference between agreements that hold and those with higher risk of collapse.

This connects to a broader pattern in how leadership shapes institutional

priorities. Women leaders often bring a stronger orientation toward prevention, coalition-building, and long-term risk management. Preventive diplomacy, which aims to stop conflicts before they erupt, remains chronically underfunded and politically understated. Yet prevention is vastly less costly, in human lives and financial terms, than crisis response. An institution whose leadership is more attuned to anticipation over reaction is better aligned with the idea that structural problems, left unaddressed, become catastrophic ones.

The Council on Foreign Relations' Women's Power Index documents a related pattern in governance: countries with greater women's parliamentary representation show lower risks of civil war and state-perpetrated human rights abuses. A country is nearly five times less likely to respond to an international crisis with violence when women's representation in parliament increases by five percentage points.

None of this proves that women are inherently more peaceful, a claim that research does not support. What it does suggest is that inclusive leadership produces better information, wider networks of trust, and more durable political buy-in. These are institutional advantages, not merely moral ones.

Representation and reform are intertwined

Critics may argue, not unreasonably, that focusing on representation distracts from more pressing challenges: financing gaps in the trillions for peacebuilding, climate action, reform of international financial institutions, geopolitical deadlock in the Security Council, sovereign debt crises across the Global South, and SDG targets that are roughly 85% off-track or stalled.

These challenges are real. They demand structural responses, reformed international financial institutions, more equitable trade architecture, and renewed multilateral cooperation.

But representation and structural reform are not competing agendas. They are intertwined. Institutions led by people who have navigated structural barriers are, in practice, less likely to have institutional blind spots about them. When decision-making rooms reflect a broader spectrum of experience, including voices from the Global South, the analysis sharpens and the solutions tend to stick.

> ***"True representation includes regional balance, generational diversity, and a range of professional backgrounds***

There is also the matter of institutional credibility. The UN champions women's political participation, equal pay, protection from violence, and girls' education. Yet without parity in its own highest offices, it increasingly appears aspirational rather than transformational. That gap erodes the legitimacy on which the organization's convening power depends.

For Member States, including permanent members of the Security Council, this should not be viewed as a concession to symbolism or pressure. It is an investment in institutional legitimacy. A more representative UN is a stronger UN, one better equipped to convene, mediate, and implement.

What would actually change things? A woman Secretary-General would be consequential. But she would not, by herself, be sufficient. What is needed is a set of interlocking structural commitments.

First, Member States must move beyond rhetorical support and actively nominate qualified women for the Secretary-General role and for senior appointments across the system. The talent pool is not the constraint – it never was. Across the UN system, women already lead complex portfolios in peacekeeping, humanitarian response, development finance, and public health.

Second, parity at the top must be accompanied by pipeline investment: mentoring, sponsorship, and transparent accountability mechanisms at every level. Progress in some areas, such as achieving near parity at the Under-Secretary-General level, demonstrates that change is possible when there is political will.

Third, the selection process is ultimately in the hands of the Security Council with the endorsement of the UN General Assembly. This does not diminish the case for public dialogues and informal hearings. They should be strengthened in support of a selection process based on merit.

Finally, the conversation must be broadened. True representation includes regional balance, generational diversity, and a range of professional backgrounds. Today's interconnected global challenges demand leadership capable of thinking across these intersections, not within bureaucratic silos. Young leaders, in particular, have been clear: they want institutions that are not only representative but also responsive.

A test of credibility and capacity

The UN faces one of the most demanding moments in its history. Armed conflicts are multiplying. Climate records are repeatedly broken. Inequality is widening within and between countries. Trust in global institutions has eroded across much of the world.

But there is also opportunity. Technological innovation offers new tools for transparency and inclusion. Sustainable finance is expanding rapidly. Youth engagement in global issues and support among younger generations for international cooperation remain strong.

This is not the moment for an organization to be running at half capacity. A more representative UN, at every level, starting at the top, is not a concession to pressure. It is an investment in institutional effectiveness and impact. The evidence points in one direction. What remains is the political will to act on it. ■

Stopping polarization from destroying democracy

Political polarization is pushing many democracies into mutually hostile camps with conflicting views of reality. Restoring democratic health will require citizens and leaders to shift the focus from what divides society to what binds it

By Jennifer McCoy, Regent's Professor, Georgia State University, Atlanta, Georgia, USA

The Swedish institute Varieties of Democracy (V-Dem) has just published its annual Democracy Report 2026, titled "Unraveling the Democratic Era?" Its indices show that nearly twice as many countries are now experiencing democratic decline as those that are improving, and that there are now more autocracies than democracies. Freedom of expression is the dimension of democracy hardest hit.

This deterioration is also reflected in the limited progress recorded in the 2024 and 2025 Sustainable Development Goal (SDG) reports, especially in SDG 16 on peace, justice, and strong institutions. Particularly concerning are indicators showing stagnation or backsliding on press freedom, access to justice, and corruption and organized crime. These reflect the broader deterioration in protections for individual freedom, civil liberties, and equality documented by V-Dem. They also show how weakened accountability mechanisms are no longer preventing abuse of state power, illicit enrichment, and the concentration of power in unchecked executives.

Exacerbating the problem is the rise of "us versus them" polarization, in which society gradually divides into two antagonistic political blocs. The V-Dem report indicates that political polarization has been rising globally since 2005.

Research I conducted with Murat Somer and Russell Luke on pernicious polarization, autocratization, and opposition strategies shows that high levels of this kind of polarization are associated with democratic erosion. We describe it as "pernicious polarization" because of its harmful effects on democracy.

▲ Large vigil for Renee Good in South Minneapolis. Good, who was observing ICE actions, was killed by an ICE agent earlier in the day

In pernicious polarization, ideological disagreements often are transformed into identity-based conflicts, in which compromise comes to feel psychologically threatening. People begin to view issues and policies in win–lose terms, divide the world into a virtuous in-group and an evil or immoral out-group, and see the opposing political camp as an existential threat to their way of life or the nation as a whole. In the extreme, political violence may result.

Such political divides inhibit the ability of a society and its elected representatives to solve intractable problems. Communication breaks down among citizens and between representatives of opposing political blocs. Compromise is seen as a sell-out of one's values and moral principles. Some of the SDGs themselves turn into faultlines of polarization, such as gender equality and protection of the climate and biodiversity.

Competing views of reality are exacerbated by the fragmentation of information, the "post-truth" era of politics, and the rhetoric of ambitious politicians seeking to exploit this context by fueling "us versus them" conflict.

How democracies can depolarize

The solution is to shift the focus from what divides to what binds a society:

- shared identities, such as love of country
- shared values and interests, such as a desire for one's children to thrive in conditions of safety, freedom, and equality

In a forthcoming book with Murat Somer, we propose several strategies to depolarize, beginning with the following two to help a society re-find a sense of common purpose and restore the health of democracy.

First, policies and mechanisms to help restore cross-cutting ties – relationships and forms of belonging that connect people across social and political divides – are necessary to rebuild trust in fellow citizens and in democratic institutions.

For example, creating or strengthening local spaces where citizens can deliberate and solve local problems together can empower them to participate in collective problem-solving rather than withdraw into isolation and alienation. Technology also creates new opportunities to involve larger numbers of citizens and to scale up such participation to regional or national deliberations. It can also provide a channel for input into representative bodies charged with collective decision-making.

Second, shifting both perspectives and outcomes from win–lose to win–win can help to depolarize. In pernicious polarization, identities and interests intersect as people judge economic or social policies in terms of who they believe deserves to benefit. They may see such policies as unfairly benefiting an "undeserving" group – immigrants, a racial or ethnic minority, or another gender – especially when polarizing politicians have blamed those groups, without evidence, for their supporters' grievances.

One win–win solution to this problem was proposed by a group of scholars at the University of California, Berkeley. "Targeted universalism" offers an alternative to the contentious binary between policies directed at specific disadvantaged groups and universal policies intended to benefit society as a whole. It argues that policies should focus on universal goals for the entire population and then devise targeted strategies based on the different needs of specific groups.

For example, improving the quality of medical care may require different strategies for different groups: rural populations may lack transportation and nearby hospitals, while racial minorities or women may receive inferior care or less attention in medical research because of physician bias or entrenched misconceptions.

Who can reverse pernicious polarization?

Who will instigate and implement the shift in perspective, policies, and systems change required to overcome pernicious polarization and renew democracy?

Pernicious polarization is the product of conscious political choices – and it can be overcome through human agency as well. The demonizing language and exclusionary policies utilized by polarizing politicians is an intentional strategy to win and keep power by dividing electorates. To overcome it will require multiple stakeholders:

- Visionary and courageous political leaders will be required to mobilize citizens and bring new ideas to fruition.
- Intellectuals, policy experts, and civic groups can create new ideas giving rise to new institutions and policies that will address the fundamental dilemmas of contemporary democracies and serve their countries better.
- Business, labor, media, and technology leaders and organizations can support efforts to turn the fault lines of polarization into opportunities for problem-solving.
- Movement builders can provide organization and a compelling narrative to create non-partisan or cross-partisan campaigns needed for democratic reform.
- Ordinary citizens can push politicians and political parties to depolarize by resisting perniciously polarizing appeals and demanding solutions to collective problems. They can help regenerate cross-cutting ties and shared values in their local communities. And they can dissent and resist when polarizers and those who erode democracy threaten the collective wellbeing.

Democratic disagreement need not destroy democracy. But preserving it will require citizens and leaders alike to reject pernicious polarization and rebuild the shared purpose, trust, and institutions on which democratic life depends. ■

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Science-based policymaking

We have built an intricate understanding of the dynamics between climate change, environmental systems, and resource use. We have also made huge strides in developing tools to analyze and model data. Why, then, are we not using this science to direct policy?

By Emi Minghui Gui, Adjunct Associate Professor, Monash University, Malaysia; Council Member, UN Council of Engineers for the Energy Transition (CEET)

A technology-integrated society today, powered by the internet, artificial intelligence (AI), and a global supply chain, has seen heavy reliance on science, technology, and innovation to address challenges in an increasingly depleting natural world. The elevated role of energy and its complex interaction with water and agrifood systems and the natural environment demand science-informed policymaking that deviates from the traditional linear policymaking process. This can assist in reconfiguring and transforming the way society organizes itself.

Science-based policymaking aims to improve policy development and societal outcomes by using robust scientific evidence rather than belief or ideology to inform decisions. It is particularly effective in supporting areas with longer-term societal impacts, such as health, education, environmental protection, social and community services, public infrastructure, and economic development. For example, acting on climate change is closely related to a clean, just, and sustainable transition across multiple systems, such as water, agrifood, health, and energy. Consequently, this has led to the establishment of science-based international conventions and national policy instruments across continents, such as the United Nations Framework Convention on Climate Change, the Global Biodiversity Framework, carbon

▲ A portion of the Great Green Wall near Mifta el Kheir, Mauritania. The project spans 11 countries across the 8,000km of the Sahel, using reforestation and land restoration to stop the expansion of the Sahara. There has been disparate progress between countries and the project had only achieved 30% of its target restoration after 19 years

trading systems, emission standards, clean air acts, and clean energy and net-zero targets.

To enable science-informed policies, we need targeted research supported by collective goals, common understanding, a collaborative approach, and the effective integration of science and policymaking to bridge science and action. Strengthening the connection between research and policymaking requires clearer communication of findings, stronger technical capacity among policymakers, and networks and infrastructure that help translate evidence into policy.

Despite its potential benefits, science-informed policymaking faces several obstacles, including:

- interconnected and evolving natural, physical, and virtual systems
- persistent institutional barriers
- an inadequate science-policy interface
- geographically uneven capabilities and political resistance

Fundamental challenge: interconnected and evolving systems

To meet the physiological needs of human society, complex interactions exist among critical systems such as water, energy, and agrifood. These call for coherent governance and integrated resource management strategies across interdependent systems at the local, national, regional, and global levels.

The challenges lie partly in the distinct characteristics of energy, agrifood, and water systems, their ecological, technological, and social footprints, and the fact that they are understood through different domains of scientific disciplines, and physical and social principles. Research and innovation capacities at the cross-system level are both difficult to develop and poorly supported within an institutional environment dominated by distinct disciplines.

At the policy level, these sectors are the responsibilities of different government departments and ministries, which in turn often engage specialist advisory bodies to address issues within sectoral boundaries. The capacity to produce cross-sectoral knowledge or decision-making at the meta-level is limited.

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▲ A South-South cooperation project between China and Madagascar to cultivate higher-yielding strains of rice. The project is designed to improve food security, reducing the country's reliance on imported staples

In addition, policymaking is an evolving process shaped by myriad interests and actors, and it can rarely be perfectly planned, even when supported by strategic foresight and appropriate data infrastructure. It is often driven by short-term political and societal pressures, whereas science typically operates on medium to long-term timescales shaped by funding mechanisms and institutional incentives. This mismatch creates major challenges for science-informed policymaking.

Institutional barriers

Science-informed policymaking also requires a strong transdisciplinary capacity for the co-production of knowledge. This should involve multiple stakeholders, including government, industry, business, academia, civil society, and indigenous communities. This can be challenging for many scientific institutions today, where impact-driven, practical knowledge creation across disciplines receives limited institutional support or recognition beyond traditional markers of academic success, such as publications and citations.

One result of these mismatched incentives is that, according to Overton, less than 6% of academic research gets referenced in policy documents. The most cited fields are in social sciences, such as economics and environmental science. Meanwhile, power dynamics foster technological advancement that can be translated into commercial value, often without sufficient understanding of, and oversight for, the inherent risks of these technologies. An unbalanced techno-optimism approach can leave governments and society ill-prepared to deal with any adverse long-term

consequences of these technologies.

In addition, science-based policies may not serve the political agenda of countries' leaders, especially when scientific evidence is not well aligned to their beliefs or political timelines.

For example, in some developing countries, governments have subsidized fossil fuel-based electricity and provided free irrigation water to increase grain production, but these measures have led to resource overexploitation and have hindered crop diversification and long-term agricultural growth. However, robust scientific evidence demonstrates that energy-saving and water-smart agriculture can provide significant benefits to farmers and land resources for long-term resilience and efficiency.

Inadequate science–policy interaction

The research community can also lock itself out of opportunities to engage with policymakers on pressing societal challenges such as climate change, sustainable development, and natural resource depletion, often by speaking in its own jargon and setting research agendas shaped by competition with academic peers. Integrating different forms of knowledge and inputs from a wide range of stakeholders is complex and requires new skills to navigate ambiguity, opacity, and uncertainty.

It also takes time to incorporate systems thinking, facilitation, negotiation, communication, and transdisciplinary collaboration into the traditional scientific process. In institutions that reward faster, more conventional academic outputs, this can be seen as a risk or a distraction from career progression.

As a result, knowledge brokers have emerged over the last decade as intermediaries between science and policy, and between science and impact, to support visioning, dialogue, exchange, and policy debates. Many NGOs and think tanks now play this role. However, sustaining transformation across multiple systems requires scientific institutions to build interdisciplinary and transdisciplinary capacity while balancing basic, strategic, and applied research with systemic scope and an intergenerational timescale.

> ***To strengthen science-informed policymaking, science and the institutions that support it need to become more effective, reflexive, and inclusive. They must also enable two-way exchange between science and society***

Regional disparity and international cooperation

Regional disparities in scientific capability are evident. They inhibit science-informed policymaking and slow progress toward the Sustainable Development Goals, especially in low-income countries.

Ensuring the affordability, scalability, and equitable access of resources, knowledge, and technologies in developing regions remains challenging. It also requires significant technical and financial assistance, as well as capacity-building programs supported by national authorities and the international community.

Both North–South partnerships and South–South cooperation in knowledge sharing and transfer are critical to making progress in science, technology, and innovation more equitable and inclusive. They can also help promote cleaner infrastructure and more sustainable practices at both the local and global levels.

Building bridges between science and policy

To strengthen science-informed policymaking, science and the institutions that support it need to become more effective, reflexive, and inclusive. They must also enable two-way exchange between science and society in response to complex challenges that are multi-system, multi-stakeholder, and multidisciplinary. Better alignment among infrastructure, natural resources and ecosystems, communities, and society can help improve human–environment interactions. It can also deliver wider benefits for climate adaptation and mitigation, and for human and environmental health and wellbeing.

Improving the interface between research, policy, and implementation requires closer alignment in the pace, quality, and coherence of interactions among researchers, decision-makers, and implementers. This will depend on:

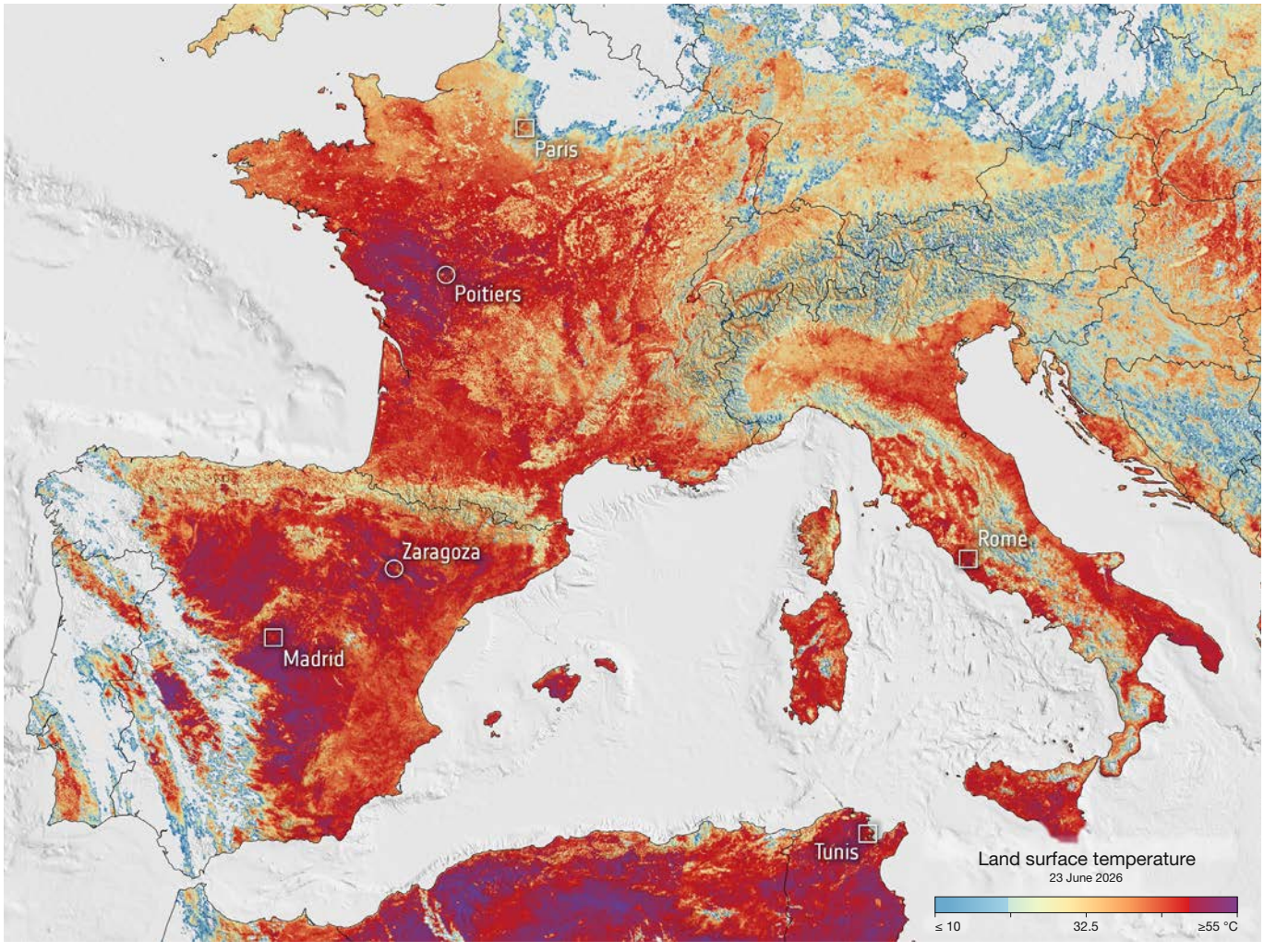
- institutionalizing the use of scientific evidence in policy formulation to support cross-sector and multilevel collaboration
- embedding the value of interdisciplinary, transdisciplinary, and integrated approaches within scientific institutions
- creating shared processes that improve communication between science and policy and help resolve disagreements
- aligning private and public efforts through governance arrangements that balance local and global interests

As the UN Secretary-General has argued, humanity must remain in control of technology, and AI governance must be shaped through shared evidence, guardrails, and inclusive international cooperation. Food, water, and other essential systems should be governed in ways that protect the public good. Science and policy, as stewards of the future, will remain central to building prosperous and resilient societies for generations to come. ■

A global digital commons for SDG delivery

The SDGs do not lack science, legitimacy, or vision – they lack an operating system. A global digital commons can help countries move from reporting progress to delivering transformation by bringing together open data, integrated modeling, stakeholder co-design, and sustainable finance

By Phoebe Koundouri, Professor, Athens University of Economics and Business and University of Cambridge; Co-Chair, UN Global Sustainable Development Report 2027; Founder and Director, AE4RIA Research Centers; Angelos Alamanos, Independent Researcher; Conrad Landis, Assistant Professor, Department of Economics, University of Ioannina; Researcher, ReSEES.AE4RIA, Athens University of Economics and Business; SDU.AE4RIA, ATHENA Research Center; UN SDSN Global Climate Hub; Anna Triantafyllidou, Researcher, ReSEES.AE4RIA, Athens University of Economics and Business; SDU.AE4RIA, ATHENA Research Center; UN SDSN Global Climate Hub; and Ioannis Arampatzidis, Researcher, ReSEES.AE4RIA, Athens University of Economics and Business; SDU.AE4RIA, ATHENA Research Center; UN SDSN Global Climate Hub



The world is not short of sustainability knowledge. But it is short of the operational infrastructure needed to use that knowledge at the speed and scale the Sustainable Development Goals (SDGs) require. Climate shocks now interact with food and energy insecurity. Debt stress limits investment in adaptation. Wars and geopolitical instability weaken cooperation. Biodiversity loss, health risks, technological disruption, and widening inequalities interact in ways that no single ministry, sector, or dataset can fully capture.

This article draws on our academic working paper, A Global Commons Framework for Systems Transformation toward the SDGs, which argues that the SDG implementation gap is, at its core, an operational gap. The missing piece is not another conceptual map of where the world should go, but a practical way to connect systemic evidence, social legitimacy, and finance so that countries can act.

The delivery gap: we know what to transform, but not how to deliver it

The 2030 Agenda remains the most comprehensive global framework for linking climate stability, economic resilience, human well-being, social justice, and institutional cooperation. Yet implementation remains far behind what is needed. Almost all countries have committed to the 2030 Agenda, and most have submitted voluntary national reviews, but global progress is still too slow, and many indicators are moving in the wrong direction. Over the past decade, influential frameworks have helped organize what needs to change. The "six transformations" proposed by Sachs and others in 2019 grouped SDG delivery around major shifts in:

◂ Surface temperatures in Europe captured by Copernicus Sentinel-3, June 2026. Analysis by the bank Triodos estimates that the European economy has been set back by €180bn due to the heatwaves this summer. On a human level, the WHO estimates that the high temperatures have caused more than 200,000 deaths in Europe over the last four years

> ***// Countries differ radically in ecological constraints, fiscal space, institutional capacity, energy systems, food systems, water risks, trade exposure, and social vulnerabilities***

- education and inequality
- health and well-being
- energy decarbonization and sustainable industry
- sustainable food, land, water, and oceans
- sustainable cities
- the digital revolution

The 2023 Global Sustainable Development Report built on this logic by identifying entry points for transformation and levers such as:

- governance
- economy and finance
- science and technology
- capacity building
- individual and collective action

These frameworks are essential. They move policy beyond isolated SDG targets and help decision-makers see that transformation must cut across sectors. But they can also become less useful when treated as fixed categories to be applied everywhere in the same way. Countries differ radically in ecological constraints, fiscal space, institutional capacity, energy systems, food systems, water risks, trade exposure, and social vulnerabilities.

This is why entry points and levers should not be prescribed in advance. They should emerge from measurement, modeling, and stakeholder engagement grounded in each country's ecological, economic, and social constraints. Before deciding which lever to pull, governments need to understand the system they are trying to transform.

A digital global commons in practice

A digital global commons can provide this missing operating layer: an open-access infrastructure of data, models, scenario tools, valuation methods, participatory processes, and financing intelligence that enables governments, researchers, communities, and investors to design country-specific sustainability pathways.

The Sustainable Development Solutions Network (SDSN) Global Climate Hub (GCH), anchored within the AE4RIA-SDSN network, offers a concrete example of this approach. It brings together AI-ready data, connected models of sectors such as energy, transport, and land use, and digital twins – virtual representations of real-world systems that allow researchers and policymakers to test different scenarios. Combined with stakeholder co-design, open-science tools, and capacity building, these resources help turn sustainability goals into practical pathways at national, regional, and global levels.

This matters because sustainability choices are never isolated. Renewable energy deployment affects land use. Land use affects food security, biodiversity, and water demand. Water stress affects productivity, health, infrastructure resilience, and investment risk. Climate adaptation depends on fiscal capacity. Social acceptance depends on whether households, workers, firms, and regions experience the transition as fair.

As set out in our working paper, we have developed a three-step framework (see overleaf) for translating this systemic logic into practical action.

A three-step approach to turning sustainability goals into action

First, countries need to monitor and assess progress continuously. This means combining administrative data, remote sensing, socio-economic statistics, infrastructure inventories, and

> ***Integrated modeling can show how energy, water, land, food, transport, health, and macroeconomic systems interact, revealing where policies create synergies and where they involve trade-offs***

local knowledge to establish baselines that policymakers can use. The output should not be another static report. It should take the form of interactive dashboards, hotspot maps, risk matrices, and digital twins that show where intervention is most urgent and where existing commitments are off track.

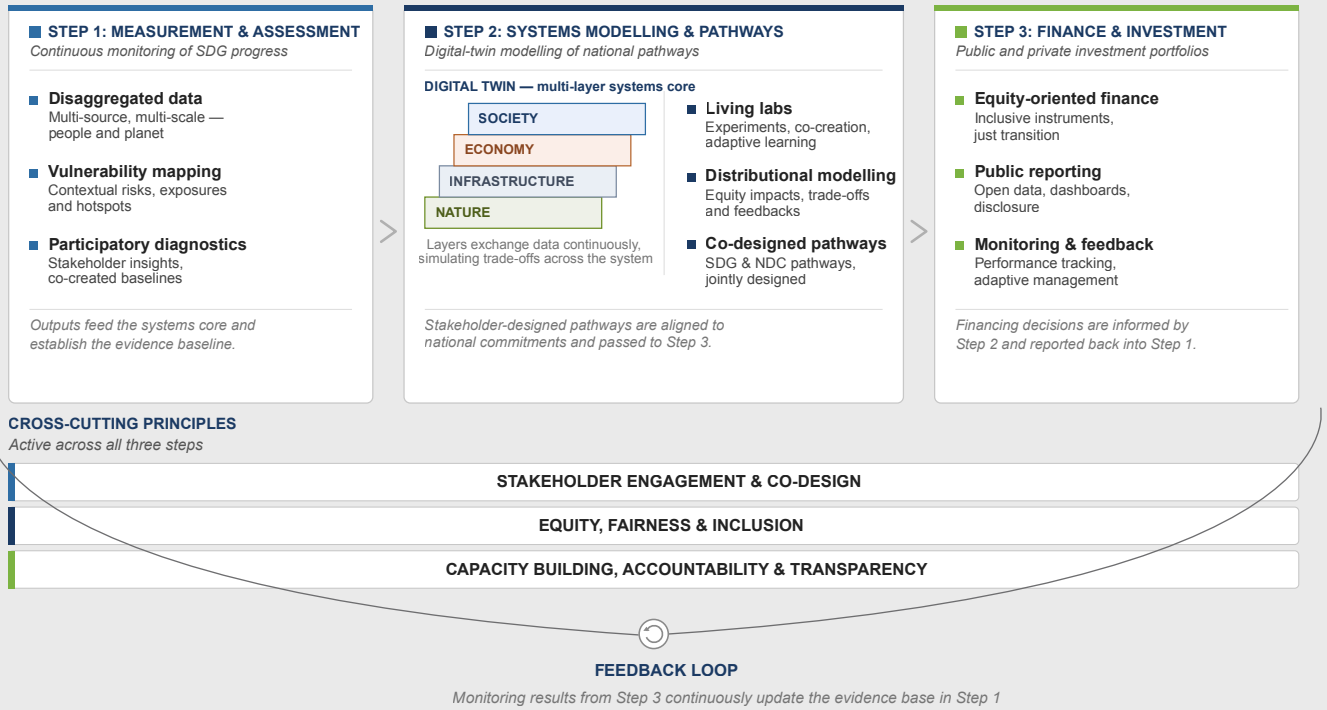
Second, countries need to develop transformation pathways that are grounded in science and co-designed with stakeholders. Integrated modeling can show how energy, water, land, food, transport, health, and macroeconomic systems interact, revealing where policies create synergies and where they involve trade-offs. But models are only useful if their assumptions are credible and their findings are clear. Living labs – collaborative, real-world settings in which researchers, policymakers, businesses, and communities co-design and test solutions – can bring local knowledge, distributional concerns, and implementation constraints into the modeling process from the outset.

The AE4RIA Living Labs network puts this engagement into practice, supported by the Living Lab Modeler, an online tool for planning, managing, assessing, and sharing the outcomes of living lab activities. This matters because co-design is not a communications exercise conducted after a model has been built. It should shape the objectives, constraints, scenarios, and implementation pathways from the beginning.

Third, countries need financing pathways and investment portfolios that are directly linked to the scientific evidence and co-design process. The global financial system still channels

FIGURE 1: Global commons framework for SDG implementation

A three-step systems model linking measurement, modelling and finance



Step 1 builds a continuously updated evidence base through disaggregated data, vulnerability mapping and participatory diagnostics. Step 2 uses a shared digital twin to run experiments, test equity impacts and co-design pathways aligned to national commitments. Step 3 turns these into equity-oriented investment portfolios, with monitoring feeding results back into Step 1.

Source: adapted from AE4RIA / SDSN Global Climate Hub (2026)

too little capital toward long-term sustainable development, especially in low and middle-income countries. Development investments often require horizons of 20 to 40 years, but many countries face short loan maturities, high borrowing costs, and debt sustainability rules that can discourage productive investment.

Financing is therefore critical. Without it, integrated modeling risks producing elegant pathways that remain unfunded. With it, governments and their partners can compare grants, concessional loans, guarantees, blended finance, private-sector participation, and user charges in terms of affordability, fiscal effects, distributional consequences, and economic performance. Governments can then use the co-designed pathways to assess gaps in their nationally determined contributions, prepare adaptation investment plans and budget stress tests, and develop pipelines of bankable projects.

Why decision-making must value more than GDP

A major weakness of conventional decision-making is that many of the benefits of sustainable development are undervalued. Cleaner air, flood protection, urban cooling, biodiversity, water quality, public health, ecosystem resilience, and cultural value often fall outside narrow economic assessments. When these benefits remain invisible, countries underinvest in the assets that sustain long-term prosperity.

Our proposed global commons framework therefore integrates ecosystem-service assessment and "beyond GDP" valuation into the modeling process, enabling progress to be assessed in ways that capture social and environmental value as well as economic output. This changes how different pathways are evaluated. Instead of ranking options solely by their costs or effects on GDP, decision-makers can compare their wider contributions to well-being, resilience, natural capital, distributional fairness, and intergenerational equity.

For SDG delivery, this is not an academic refinement – it is a political and financial necessity. When nature-based solutions, resilience investments, or pollution reductions are not valued properly, they appear less attractive than they really are. Measuring their benefits transparently can support stronger public investment, better regulation, green bonds, sustainability-linked finance, and more credible just transition packages.

The public interest challenge: digital tools must be governed as public goods

There is a legitimate concern that digital sustainability infrastructure could reinforce inequality if it becomes proprietary, opaque, or accessible only to institutions with advanced technical capacity. Models can also create false confidence when they obscure uncertainty, the choices built into them – such as which data, methods, and scenarios to use – or their distributional effects. AI can accelerate analysis, but it can also reproduce bias when data quality and governance are weak.

This is why the "commons" in a digital global commons is not decorative – it is foundational. Open methods, transparent modeling choices, shared datasets, public reporting, stakeholder review, accessible training, and accountability mechanisms are essential. The aim is not to centralize authority in a technical platform. It is to democratize access to the tools needed for informed decision-making.

Capacity building must therefore be part of the infrastructure itself. Countries and communities need open-access training programs, policy labs, and local technical partnerships so that they can use, challenge, adapt, and improve the tools themselves. A global commons framework should not export answers. It should strengthen the capacity of people in each context to develop their own.

The way forward: from SDG reporting to SDG delivery

The SDG agenda does not need another conceptual map as much as it needs a delivery system. Reporting progress is necessary, but insufficient. Countries need adaptive pathways that can be monitored, revised, financed, and implemented under uncertainty.

A digital global commons offers one practical route forward by connecting measurement to modeling, modeling to participation, participation to finance, and finance back to accountability. It can reveal where action is urgent, where trade-offs are unavoidable, where co-benefits can help build coalitions, and where investment can deliver the greatest social, economic, and environmental return.

> ***"A digital global commons offers one practical route forward by connecting measurement to modeling, modeling to participation, participation to finance, and finance back to accountability***

The SDGs remain the right vision. But vision alone will not deliver transformation. The world now needs the operational infrastructure to act on that vision: open data, integrated models, stakeholder co-design, beyond-GDP valuation, and financing pathways that turn ambition into implementation. The choice is whether we build the tools needed to navigate complexity intelligently or continue improvising with instruments designed for a simpler world. The first option is still within reach. The cost of the second is one no generation should have to bear. ■

Innovation for every drop

How the Mohammed bin Rashid Al Maktoum Global Water Award is advancing global solutions to water scarcity through innovation, recognition, and impact

About 2.1 billion people worldwide still lack access to safely managed drinking water services, according to the World Health Organization and UNICEF's Joint Monitoring Programme.

Despite the availability of freshwater resources globally, millions living in arid and hard-to-reach regions are left without reliable access. For many, accessing water requires hours of daily travel, a burden that falls largely on women and children, amounting to an estimated 250 million hours spent collecting water each day, according to UN Women's 2024 gender snapshot. Access alone is not enough, as the water collected is often unsafe, exposing communities to preventable diseases such as diarrhea, cholera, and typhoid.

Addressing this reality requires solutions that can be deployed where they are needed most, while remaining adaptable, sustainable, and capable of delivering impact at scale. A key initiative in this global effort is the Mohammed bin Rashid Al Maktoum Global Water Award, supervised by Suqia UAE, the UAE Water Aid Foundation. Held under the umbrella of the Mohammed bin Rashid Al Maktoum Global Initiatives Foundation, the award serves as a global platform to recognize, incentivize, and accelerate the development of sustainable water solutions powered by renewable energy.

By shining a spotlight on innovation and enabling visibility and scale, the award contributes to improvements in how water is produced, treated, and delivered worldwide.

A platform for innovation and impact

The award was established to inspire the development of innovative technologies that can produce, desalinate, distribute, store, and purify water using renewable energy sources. Its purpose is to encourage and reward breakthrough ideas that address water scarcity, particularly in communities affected by poverty, climate vulnerability, and disasters.

Over time, the award has evolved to reflect global needs and technological progress. What began with a focus on solar-powered solutions has expanded to include a broader range of renewable energy technologies such as wind, biomass, geothermal, ocean, and gradient salinity. This ensures that recognized solutions are adaptable, context-specific, and capable of operating across diverse environments.

Importantly, the award's structure is designed to engage innovation at every level – from large-scale, implemented projects to research advancements and individual contributions. This inclusive framework strengthens the global pipeline of ideas and promotes solutions that are both practical and scalable.

Advancing SDG 6 through innovation

The award aligns closely with

◄ Prize-winning technology in action: Pump&Drink® in the Ivory Coast (far left), provides community-scale, solar-powered, drinking water supply; a Kumulus Water installation in Tunisia (left) condenses drinking water from the humidity in the ambient air

مبادرات محمد بن راشد آل مكتوم العالمية
Mohammed Bin Rashid
Al Maktoum Global Initiatives

جائزة محمد بن راشد آل مكتوم العالمية للمياه
Mohammed Bin Rashid Al Maktoum
Global Water Award

Sustainable Development Goal 6, which aims to ensure the availability and sustainable management of water and sanitation for all. By incentivizing innovation and recognizing impactful solutions, the award helps to accelerate progress toward universal access to safe drinking water.

Beyond recognition, the award creates a global platform for knowledge exchange and collaboration. It brings together innovators, researchers, and institutions to share insights, showcase solutions, and inspire further advancements, amplifying the collective effort to address water scarcity.

Recognizing solutions that deliver real impact

Since its inception in 2015, the award has recognized 43 winners from 26 countries, reflecting its global reach and influence. These innovators have developed solutions that are not only technologically advanced but also practical, scalable, and impactful.

The results are tangible. In the fourth cycle alone, recognized solutions have reached more than 14 million beneficiaries worldwide, demonstrating how innovation – when supported and scaled – can deliver meaningful outcomes.

Among the recognized innovations are solar-powered desalination systems providing reliable drinking water in off-grid and remote areas. Other solutions include compact, portable purification units designed for rapid deployment in emergencies, capable of delivering safe water within 48 hours of a disaster.

Several projects have also introduced integrated, circular systems that combine water treatment with renewable energy generation and resource efficiency. These solutions not only address immediate needs but also contribute to long-term sustainability.

What distinguishes these innovations is their adaptability. Designed to operate in challenging environments, from rural communities to disaster zones, they demonstrate how technology can be applied effectively where it matters most.

Enabling a global innovation ecosystem

A key strength of the award lies in its ability to engage a diverse range of participants – from corporations and research institutions to startups, young people, and individual innovators. Through its structured categories, the award ensures that innovation is recognized and encouraged across all levels.

This inclusivity is essential. Addressing global water challenges requires diverse perspectives and interdisciplinary collaboration. By creating a platform that brings together different stakeholders, the award fosters solutions that are not only innovative but also inclusive and contextually relevant. In addition to recognition, the award provides visibility and credibility, enabling innovators to scale up their solutions, attract partnerships, and expand their impact globally.

The 5th cycle: integrating AI for smarter water solutions

As technological advancements reshape global systems, the fifth cycle of the award introduces a forward-looking focus on artificial intelligence (AI). This reflects a growing recognition of the role digital technologies can play in addressing complex challenges such as water scarcity.

AI offers new possibilities for optimizing water systems – from predictive monitoring and process automation to demand forecasting and operational efficiency. By encouraging the integration of AI and machine learning, the award promotes solutions that are not only sustainable but also intelligent and adaptive. This evolution ensures that the award remains aligned with global technological trends while continuing to prioritize real-world impact and scalability.

Every drop counts

As the world faces increasing water stress, the need for innovative and sustainable solutions has never been greater.

The Mohammed bin Rashid Al Maktoum Global Water Award demonstrates the power of recognition and collaboration in accelerating progress. By enabling innovation and amplifying impact, the award is contributing to a future where clean water is accessible to all, ensuring that every drop truly counts.

A call to innovate

The Mohammed bin Rashid Al Maktoum Global Water Award is more than recognition – it is a catalyst for innovation. It invites innovators, researchers, institutions, and changemakers to contribute solutions that can shape a more sustainable future. With a total prize pool of USD 1 million, the award provides both recognition and opportunity. It enables ideas to gain visibility, credibility, and momentum, transforming innovation into impact.

Applications for the fifth cycle are open until 30 September 2026, inviting innovators around the world to step forward, share their ideas, and be part of a global effort to address one of humanity's most urgent challenges. ■

Applications can be submitted via www.mbrwateraward.ae/awards, and inquiries can be sent to award@suqia.ae

Why climate technology is a women's and girls' issue

When climate solutions fit local realities, they can restore ecosystems, strengthen food security, reduce vulnerability for women and expand their economic agency

By Molly Sharone, Climate Technology Specialist and Gender Focal Point, Climate Technology Centre & Network (CTCN) and Isabel Hagbrink Communications Lead, CTCN

Climate change is not gender neutral. As droughts intensify and water sources shrink, the burden of securing food, fuel and incomes falls on those whose lives depend on natural resources, particularly women and girls. If climate solutions are to work, they must reflect the realities of women's lives, including how they farm, source for water and manage households.

Women make up the majority of smallholder farmers in many parts of the world, particularly in sub-Saharan Africa. When climate change disrupts these systems through droughts, floods, or land degradation, it is women and girls who feel the consequences first and most severely. Climate technologies that address water scarcity, food insecurity, energy access, and disaster preparedness, therefore, have an outsized impact on women's lives.

Climate technology as a practical solution in Nigeria

Rather than viewing climate technology as abstract or technical, it is best understood through its real-world applications. When climate technologies are designed with local realities and

▼ A small-scale hydroponics pilot in Kaduna State, Nigeria, where vegetables are grown using water in a closed-circuit greenhouse. This innovative approach to agriculture is designed to protect farmers from climate change and conflict, which afflict the region

© UN CTCN/Miranda Rikki Tasker

gender in mind, they directly reduce vulnerability and create opportunities.

A powerful example comes from northern Nigeria, where communities face a convergence of challenges: prolonged drought, soil degradation, and conflict over arable land. Traditional farming has become increasingly risky, particularly for women, who are often responsible for household food production but have limited access to land, water, and security. In Kaduna State, women often travel long distances to cultivate fields outside their villages, where soil degradation and climate variability make harvests increasingly unreliable. These journeys can also expose them to heightened security risks linked to land-use pressures and tensions with pastoralist communities

Through a climate technology initiative focused on hydroponics, the village women are now growing food closer to home. Using water-efficient, soilless crop production systems, women cultivate vegetables in greenhouses. This has not only restored food production but also reduced fear and food insecurity. The result goes beyond higher yields. It restores dignity, reduces fear and strengthens women's autonomy in a fragile environment.

Restoring land, livelihoods, and leadership

Climate technologies are also transforming degraded landscapes. In northern Cameroon, youth and women are rewilding degraded landscapes through climate-smart land restoration. Traditional synecoculture companion planting strategies, combined with modern techniques, are bringing green cover back to exhausted soils. As biodiversity returns and soil health improves, communities are rebuilding food systems and creating new income opportunities – particularly for women-led households.

Water management technologies are equally critical. Climate change is intensifying both droughts and floods, often within the same regions. According to the World Bank's Uncharted Waters report, children, particularly girls, are often the first to feel the secondary effects. In times of drought or failed harvests, girls are more likely than boys to be pulled out of school to help at home, care for siblings, or contribute to household subsistence. This creates a cycle in which climate change reinforces existing inequalities, limiting girls' education and their long-term economic opportunities.

Energy technologies that transform daily life

At the household level, access to clean energy technologies can greatly reduce women's workload and health risks. In many rural areas, women spend hours collecting firewood and cooking over traditional biomass stoves – work that is time-consuming, physically demanding, and harmful to their health.

> ***"Ultimately, climate technology is a women's and girls' issue because climate change itself is a justice issue***

In Zimbabwe, solar drying technologies are transforming women's livelihoods in woodlands and mopane ecosystems. Traditionally, drying nutrient-rich food such as mopane worms required open fires, exposing women to smoke, accelerating deforestation, and increasing the risk of forest fires. Solar dryers remove the need for fuelwood, improve product quality and shelf life, and allow women to earn higher incomes in safer conditions.

Scaling such solutions requires expanding access to affordable solar equipment, supporting women-led producer groups, and integrating clean energy technologies into rural development strategies.

Solar-powered irrigation systems offer similar benefits. In Mozambique, pay-as-you-irrigate models enable women farmers to access reliable water without high upfront costs. Because payments align with harvest cycles, farmers can increase yields and climate resilience without incurring unsustainable debt.

From vulnerability to agency

Climate technology is not only about reducing harm – it is about shifting power. Women are already leading adaptation and resilience efforts in their communities. When they are involved in the design, governance, and deployment of technologies, solutions are more effective, inclusive, and sustainable –the results are more responsive to realities and more likely to last.

Youth engagement is equally important. Young women and men bring innovation, digital skills, and energy that are essential for scaling solutions. Tools such as WhatsApp-based advisory systems can deliver real-time weather updates and farming guidance, strengthening farmers' decisions in only increasingly unpredictable climates.

Climate technology as a justice issue

Ultimately, climate technology is a women's and girls' issue because climate change itself is a justice issue. Those least responsible for emissions are the most affected, and within those communities, women and girls bear the greatest risks.

Investing in climate technologies that address basic needs – food security, water access, clean energy, and safety – does more than reduce climate vulnerability. It strengthens education pathways, livelihoods, leadership, and broader human development.

However, climate justice requires more than just access: it requires that women and girls have meaningful power in shaping, governing, and benefiting from these technologies. This is the focus of the UNFCCC Women and Gender Constituency, which has been advocating and demonstrating that when women and girls are placed at the center of climate solutions, technology becomes more than innovation – it becomes a pathway to resilience, dignity, and hope. ■

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Is the European Green Deal's vision still intact?

Europe has not abandoned the Green Deal – its flagship strategy for climate neutrality and shared prosperity – but it risks hollowing it out. As implementation pressures mount, the question is not whether the vision survives on paper, but whether it can still deliver a fair, system-wide transformation aligned with the SDGs

By Phoebe Koundouri, Professor, Athens University of Economics and Business and University of Cambridge; Co-Chair, UN Global Sustainable Development Report 2027; Founder and Director, AE4RIA Research Centers; Angelos Alamanos, Independent Researcher; Georgios Feretzakis, Researcher, SDU, ATHENA Research Center, Athens; UN SDSN Global Climate Hub; ReSEES, Athens University of Economics and Business; AE4RIA; Angelos Plataniotis, Economist, SDU, ATHENA Research Center, Athens; UN SDSN Global Climate Hub; ReSEES, Athens University of Economics and Business; AE4RIA; and Ioannis Arampatzidis, Researcher, ReSEES.AE4RIA, Athens University of Economics and Business; SDU.AE4RIA, ATHENA Research Center; UN SDSN Global Climate Hub

Europe entered 2026 with a familiar question. Has the vision of the European Green Deal (EGD) been eroded by overlapping crises, political backlash, geopolitical unrest, and competing priorities? The honest answer is that the vision is still there, but it's at risk of being narrowed. And a narrowed EGD – limited to decarbonization targets, industrial policy, and compliance checklists – is

◂ Low-carbon transport in Strasbourg, France. The European Green Deal remains strong on energy and emissions but is struggling to gain traction with the wider SDGs

not likely to survive the decade.

The EGD was conceived as a growth strategy for a climate-neutral and socially fair European Union by 2050, spanning energy, industry, agriculture, transport, biodiversity, finance, and innovation. But today's pressures are real: energy security concerns, inflation, geopolitical instability, and tighter fiscal space all push decision-makers toward quick wins and visible results.

The danger is not that Europe abandons the EGD completely. The greater risk is that Europe keeps the name while quietly shrinking the promise, shifting from a societal transformation to a mainly technical transition.

The warning light: Europe is aligning the Green Deal with some SDGs while neglecting others

A recent assessment of 74 EGD policy documents (spanning 2019 to 2023), using machine-learning text-mining validated by human review, offers a clear diagnostic: Green Deal policies align strongly with four of the Sustainable Development Goals (SDGs):

- SDG 7 (clean energy)
- SDG 12 (responsible consumption and production)
- SDG 13 (climate action)
- SDG 17 (partnerships)

However, they underrepresent SDGs tied to:

- social foundations
- poverty and inequality
- hunger
- health
- education
- decent work
- peace
- strong institutions

(Koundouri, P. and others, Assessing the sustainability of the European Green Deal and its interlinkages with the SDGs.)

This matters because sustainability is more than just cutting emissions. Sustainability has three parts: environmental stability, economic resilience, and social cohesion. When policy attention concentrates on energy decarbonization and industrial transformation while leaving the social SDGs structurally thinner, a political and moral gap opens. And that gap becomes a legitimacy problem, especially when households experience rising costs, employment uncertainty, or uneven regional impacts.

"The global context should be a warning. Only 17% of SDG targets are on track worldwide, with many progressing too slowly and a significant share stalled or regressing… Europe is not immune to that implementation gap

In the article mentioned above, Koundouri and others highlight that, even when the EGD is viewed through the Six Transformations lens, "Health, Wellbeing, and Demography" remains the least represented transformation in EGD policies. This connects to a broader point made in the Global Sustainable Development Report 2023, which emphasizes that siloed approaches are a poor fit for the SDGs, because progress depends on transformations that cut across sectors, institutions, and time horizons.

Put simply, the EGD remains strongest where it began – namely, energy and emissions – and weakest where public trust is won or lost – namely, daily wellbeing, fairness, and social protection.

The vision is intact, but needs a more concrete operating system

If the diagnosis is clear, so is the opportunity. The Green Deal can still be Europe's most credible pathway to climate neutrality and shared prosperity. But that will only happen if Europe treats the EGD as a full-spectrum sustainable development project aligned with the SDGs, rather than assuming that decarbonization will automatically deliver social progress.

This is where implementation infrastructure becomes as important as ambition. Europe has strategies. What it lacks is an operational, integrated delivery system – an operating system that can connect goals to locally tailored pathways, quantify trade-offs across sectors, and keep adjusting as conditions change.

The global context should be a warning. Only 17% of SDG targets are on track worldwide, with many progressing too slowly and a significant share stalled or regressing (SDGs Report 2024). Europe is not immune to that implementation gap. So, the key question for the year ahead is not simply whether the Green Deal is intact on paper, but whether Europe can build the capability to implement it as a systems transformation – and demonstrate, transparently, that it is fair.

A practical route forward: the Global Climate Hub's holistic approach

The United Nations Sustainable Development Solutions Network (SDSN)'s Global Climate Hub is designed as precisely this kind of operational capability: an interdisciplinary initiative that combines AI-ready data infrastructure, linked sectoral models, stakeholder co-design, and open-access digital tools to build implementable sustainability

pathways from national to global scales *(Alamanos, A., The Global Climate Hub and Koundouri, P. and others, Innovating for sustainability: The Global Climate Hub).*

Crucially for the European debate, the SDSN Global Climate Hub is not a standalone project. It sits within the wider SDSN ecosystem and is designed to connect research, policy, and practice around shared tools and pathways. It offers a model Europe can draw on: coordinated, evidence-led, and transparent enough to earn public trust *(Koundouri, P. and others, An integrated assessment of the European National Commitments for climate neutrality).* For the EGD, this matters because it is practical, not just a blueprint.

First: integration that matches reality

The SDSN Global Climate Hub's approach emphasizes system-dynamics – cross-sectoral modeling that links major natural and infrastructure systems (water, land-use, food, energy, transport, marine systems) rather than treating them as separate policy silos. That linkage matters because Green Deal choices interact: renewables compete with land; water stress shapes productivity; and shifts in production and trade patterns affect competitiveness. Policy that ignores those interdependencies produces elegant plans that fail in practice *(Koundouri, P. and others, Assessing national climate-neutrality plans through a modelling nexus lens: the case of Greece).*

Second: legitimacy through participation

The Global Climate Hub's approach places stakeholder engagement and co-design at the center of pathway development. This is because the ability to implement solutions depends on whether policies reflect lived constraints and perceived fairness. Engagement surfaces institutional bottlenecks, local acceptance issues, and distributional effects (which models alone can miss), while building a sense of shared ownership.

> ***"Europe does not lack policies; it lacks integration… An integrated systems approach offers a practical way to quantify synergies and trade-offs, design coherent packages, and course-correct over time***

Third: measurement that goes beyond GDP

A core element of the Global Climate Hub's approach is the integration of socio-economic narratives, welfare distribution, and valuation of externalities into decision support. In this way, sustainability choices reflect the true costs and benefits of natural and social capital. This matters for the EGD because many of its benefits – such as clean air, resilience, ecosystem restoration, and risk reduction – are systematically undervalued in conventional economic decision-making.

Fourth: open and usable decision support

The Global Climate Hub's design includes digital infrastructure for data harmonization, model coupling, results visualization, and (eventually) "digital twins" (dynamic digital representations of real-world systems). This means that exploring scenarios becomes transparent, iterative, and usable by policymakers and stakeholders. For the EGD, that kind of operational layer can reduce fragmentation, improve transparency, and accelerate learning across EU member states.

The year ahead: three priorities

If Europe wants the Green Deal's vision to remain intact, three concrete shifts should define this year's narrative and policy practice.

1. Reframe success as SDG-consistent delivery, not only emissions delivery

The EGD's climate core must remain strong. But it must be paired with credible performance on underrepresented social SDGs (poverty, inequality, health, education, decent work, and strong institutions), because these are the foundations of durable consent.

2. Move from policy stacks to integrated pathways

Europe does not lack policies; it lacks integration. The evidence already shows heavy concentration on specific SDGs and recurring gaps in social sustainability. An integrated systems approach offers a practical way to quantify synergies and trade-offs, design coherent packages, and course-correct over time.

3. Protect the social contract with transparent distributional analysis and just transition design

An EGD that is perceived as unfair will not endure. Fairness is not an add-on – it is part of the political technology of transformation. Embedding distributional outcomes into modeling, finance design, and participatory governance is how Europe keeps the "deal" in the Green Deal.

So, is the EGD still intact?

The short answer is yes – its vision is still intact in purpose and architecture. But it is not self-sustaining. It will remain intact only if Europe refuses to let the project collapse into a narrow decarbonization agenda.

Instead, the EU must upgrade the EGD into a full sustainability transformation aligned with the SDGs – and with integrated modeling, open digital tools, and social legitimacy built into the design. ■

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Why universal health coverage must tackle inequality

Universal health coverage – a central target of the SDGs – seeks to guarantee access to essential health services without financial hardship. Achieving it, however, requires confronting the inequalities in access and quality that coverage alone cannot resolve

By Tobias Schillings, Postdoctoral Researcher, Technical University of Munich; Research Associate, University of Oxford

Universal health coverage (UHC) has become one of the central ambitions of the global development agenda. Over recent decades, governments have expanded insurance schemes, broadened benefit packages, and increased investment in primary care. Measured against the headline indicators of Sustainable Development Goal (SDG) Target 3.8, the commitment to UHC has produced real progress.

But expanding who is formally covered is not the same as building truly universal health systems.

In many countries, formal enrollment tells us little about what people actually receive when they seek care. A person may be formally entitled to services while still facing under-resourced facilities, long waiting times, unavailable medicines, or out-of-pocket payments that risk pushing

▲ UNICEF administering polio vaccinations for Sudanese refugees in Ademour, Chad. Life expectancy in Chad is among the lowest in the world

them into poverty. Meanwhile, those with the financial means can often bypass inadequate public provision by turning to private alternatives that are better resourced and of higher quality.

These inequalities are not limited to a simple public–private divide. Even within public systems, access and quality may vary sharply by region, occupation, income, or social group. Separate schemes may offer different levels of entitlement to different populations. The result is a layered reality: more people are included in health systems, but not necessarily on equal terms.

This matters because universal healthcare is not only about whether people enter the system, but also about what kind of system they enter.

Universalism is more than coverage

Addressing this reality requires a more precise understanding of what it means for a health system to be universal. The question is not only whether people are enrolled, but what they receive when they seek care – and whether what they receive depends on who they are.

> ***"The central policy implication is not simply to do more of what has worked so far. Expanding access without addressing how systems are structured risks consolidating a pattern in which coverage grows while inequality persists***

Why inequality in healthcare matters

The consequences of unequal and insufficient health systems are not abstract. Research on low and middle-income countries has shown that more than 8 million people die each year from conditions that should be treatable, and that 60 percent of these deaths are linked not to the complete absence of care, but to poor-quality care. The problem is therefore not simply that people cannot reach the health system. Often, the problem is that the system cannot adequately serve them – and that this inadequacy is unequally distributed.

But the stakes extend beyond health outcomes alone. Where healthcare systems are stratified by ability to pay, they entrench poverty traps and deepen economic inequality. They also erode the institutional trust on which inclusive societies depend. When people experience public services as unreliable or unequal, their confidence in the state – and in shared social institutions more broadly – diminishes. This is why UHC must be understood as part of the wider SDG agenda: unequal health systems do not merely fall short on health. They undermine the foundations of equitable and resilient societies.

A useful way to frame this is to ask three questions simultaneously:

- Who is covered?
- What level and quality of services do they actually receive?
- Is access distributed equitably across social groups?

This distinction matters because health systems can expand in very different ways. One country may increase formal enrollment while offering only limited and underfunded services to large parts of the population. Another may achieve broad access but continue to tolerate major differences in quality between regions, occupations, or income groups. A third may combine wide coverage with adequate public support and relatively equal access to care.

All three may appear to be moving toward UHC, but they are not equally universal. Understood this way, universalism is a matter of degree rather than a binary achievement. A genuinely universal health system progressively narrows the gaps in access, quality, and financial protection – rather than simply widening the tent of formal enrolment.

What the Healthcare Universalism Index shows

To measure these dimensions, Diego Sánchez-Ancochea and I developed the Healthcare Universalism Index (HUI), launched as part of the UN Development Programme's Special Report on Human Security. Rather than tracking enrollment alone, the HUI combines three dimensions – coverage, generosity, and equity – to ask whether health services are adequately funded and equitably distributed across the population.

Our research (The Role of Healthcare Universalism in Advancing Human Security) shows that the global picture is more nuanced than a simple story of success or failure. Since the mid-1990s, healthcare universalism has improved substantially across many parts of the world. Progress in coverage and access has been real and meaningful – and it challenges the assumption that poorer countries must wait for economic growth before expanding health services.

But the same evidence exposes persistent gaps in the dimensions that matter most for equality. Coverage has expanded; generosity and equity have lagged. In lower-income countries, limited public investment remains the central structural barrier, with basic entitlements often existing on paper without the resources to make them real. In richer countries, high average coverage can conceal persistent inequalities driven by marketization and fragmented provision.

Overall, the world has moved toward broader inclusion, but not consistently toward greater equality in healthcare.

From evidence to policy: the challenge of segmentation

The central policy implication is not simply to do more of what has worked

so far. Expanding access without addressing how systems are structured risks consolidating a pattern in which coverage grows while inequality persists.

The most underappreciated obstacle here is segmentation. Many health systems have expanded by layering separate schemes on top of one another – different entitlements for different groups, separate benefit packages for formal and informal workers, parallel tracks for the insured and the uninsured. These arrangements can raise headline coverage figures while quietly deepening the inequalities that matter most. The structure of the health system can end up reproducing the structure of society.

Moving toward more equal systems therefore requires more than investment – it requires building common frameworks: shared benefit packages, integrated service provision, and a sustained commitment to quality alongside coverage. Reducing out-of-pocket spending remains a direct test of whether access still depends on ability to pay. And tracking enrollment alone overstates success; monitoring frameworks that capture equity and quality alongside coverage are essential to holding systems accountable.

// Progress on this deeper definition of universalism is possible at all levels of development – that it is as much a matter of political choice and institutional commitment as it is of economic capacity

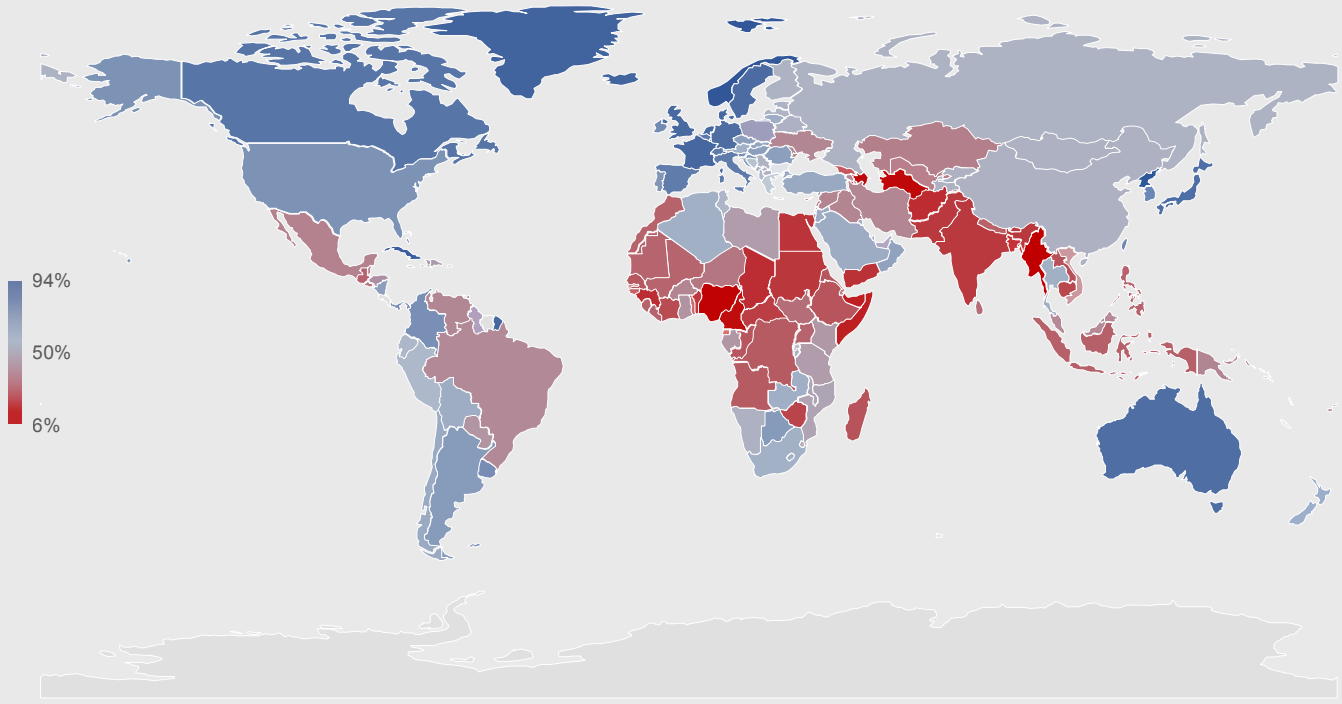
A more ambitious vision of UHC

The ambition of UHC is not simply to include everyone in a health system. It is to ensure that everyone is treated as an equal member of it. That is a harder goal. It requires sustained investment, institutional reform, and the political will to challenge arrangements that benefit those already advantaged.

But the experience of many countries shows that progress on this deeper definition of universalism is possible at all levels of development – that it is as much a matter of political choice and institutional commitment as it is of economic capacity.

If the next phase of the global health agenda is to succeed, it will need to hold both ambitions at once: expanding who is covered, and transforming what coverage means. The SDGs call for a world in which no one is left behind – not only in principle, but in practice. On health, that means moving from a politics of enrollment to a politics of equality. ■

FIGURE 1: Healthcare Universalism Index



Source: Schillings and Sánchez-Ancochea 2022

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Why climate risk belongs in economic management

More frequent extreme weather events, as well as gradual changes to the global climate, are increasingly harming people and economies. Integrating climate risk into economic management can help unlock the finance needed to build resilience and protect progress towards the SDGs

◂ Sindh province, Pakistan, women and girls fetch drinking water after extreme flooding. Frequent flooding in Pakistan over recent years has strained public finances, which in turn has made its sovereign debt vulnerable

By Kate Levick, Associate Director - Finance & Resilience, E3G; Stephanie Segal, Senior Associate, E3G; Claire Peraldi Decitre, Researcher, E3G; Salvatore Serravalle, Program Leader, E3G; Faith Hammond, Senior Policy Advisor, E3G

As outlined in E3G's recent briefing paper, Climate change as a macroeconomic risk multiplier, climate change creates six vectors of economic risk:

- **Debt sustainability:** floods in Pakistan in 2010, 2022, and 2025, and Hurricane Fiona in 2022 in the Dominican Republic showed how natural catastrophes can trigger or increase sovereign debt vulnerabilities. The Latin American and eurozone debt crises of the 1980s and 2010s showed how national debt crises and potential defaults can trigger regional macroeconomic instability.
- **Trade and supply chains:** worsening extreme weather events and climate-related environmental stressors are likely to further destabilize supply chains and trade, turning critical local shocks into global crises. In 2021, operational challenges to semiconductor production in drought-hit Taiwan revealed that a localized supply chain shock can have deep trade impacts in an interconnected global economy.
- **Energy markets:** economies that are heavily reliant on fossil fuels are creating spillover risks for climate-vulnerable countries through their impact on the global climate. Conflict and associated damage to refineries in the Middle East, together with blockades in the Strait of Hormuz, have demonstrated in 2026 that reliance on fossil energy commodities is a significant macroeconomic risk both for countries that import and export fossil fuels.
- **Food markets, inflation, and monetary policy:** shocks to agricultural production cause inflation and instability, threatening growth and creating challenges for monetary policy and social cohesion. With climate change and climate impacts weakening agricultural yields, more acute and/or persistent inflation with lower supply will make both short-term price stability and long-term monetary policy formulation more difficult.
- **Financial stability:** the 2008 global financial crisis revealed that an asset price crash coupled with the interconnectedness of opaque financial systems can have devastating systemic macroeconomic and financial implications. Today, growing climate-induced physical losses and transition risks are threatening asset classes and insurance markets. Given the speed of information flows and suddenness of climate shocks, a climate-induced financial crisis is not unlikely.
- **Labor and productivity:** the COVID-19 pandemic demonstrated that human health is intimately linked to productivity and growth. With climate change driving more extreme and frequent flooding, millions in densely populated Southeast Asian regions are at risk of vector-borne disease outbreaks, putting regional growth in jeopardy.

The climate finance gap remains stark

While climate impacts are felt by countries around the world, the risks and impacts are particularly severe for vulnerable low-income countries. Investment in climate and economic resilience is badly needed in these economies.

Yet, according to the Climate Policy Initiative's 2025 spotlight report on climate finance for emerging markets and developing economies (EMDEs), in 2023 only USD 45 billion of climate finance (including funds mobilized domestically) went to least developed countries. In the same year, the comparable figure for China alone was USD 685 billion. The UN Environment Programme estimates in its Adaptation Gap Report 2025 that adaptation finance flows to developing countries need to increase by a factor of 12 to 14.

In 2024, parties to the UN Paris Agreement agreed at COP29 in Azerbaijan to scale up climate finance to developing countries to USD 300 billion per year in international public finance by 2035, and USD 1.3 trillion in finance from all sources. Yet the

financial system struggles to prioritize these investments. Geopolitical tensions, economic fragmentation, and volatility are significantly impacting the availability of public finance and investment conditions for private finance. This reinforces structural vulnerabilities that result in net capital outflows from EMDEs to high-income countries.

There is no single solution to these challenges, but many levers can be scaled and deployed to create change. The interconnected nature of risks warrants a comprehensive approach that tackles mitigation, transition, adaptation, and resilience.

Risk-sharing mechanisms can unlock investment

One area receiving increasing focus is risk-based finance mechanisms, which often involve elements of public–private partnership. The insurance protection gap is widening worldwide, leaving both advanced and vulnerable countries exposed to climate-related risks.

However, a range of steps can be taken to improve the situation. In 2026, the T7 (the official engagement group of the G7) made recommendations to the G7 on enhancing insurability against natural disasters, which were reflected in the G7 Finance Ministers' and Central Bank Governors' communiqué of 19 May 2026. The recommendations focused on:

- scaling the use of financial protection tools against natural disasters
- promoting fairer burden-sharing between the insurance industry and public authorities
- highlighting the role of preventive action to reduce risks
- mobilizing financial resources for countries most vulnerable to climate change

For example, the T7 recommended that the G7 could drive the creation by willing countries of a coordination platform to align several existing international initiatives that seek to build solidarity and resilience by pooling funds to counter exposure to climate risks. Such initiatives include the Global Shield and regional risk pools such as African Risk Capacity and the Caribbean Catastrophe Risk Insurance Facility (CCRIF). A new platform could support initiatives to address a broader set of risks, including slow-onset risks such as persistent drought, and could improve the access of the most vulnerable countries to risk transfer solutions, such as catastrophe bonds.

Better risk assessment can lower the cost of capital

Another area for action relates to the regulatory regime that governs how the financial system assesses climate risk and resilience. Central banks and financial supervisors agree norms for financial risk management, which cascade through the global economy by shaping the decisions of banks and insurance firms. Risk assessments made by credit rating agencies also play an important role in setting norms.

> ***// Central banks and financial supervisors agree norms for financial risk management, which cascade through the global economy by shaping the decisions of banks and insurance firms***

However, imperfect implementation can unintentionally constrain climate finance by making investment in developing countries more expensive. For example, risk assessments may not fully take into account the role that development finance institutions play in reducing investment risk in developing countries when they are involved in providing climate finance to the poorest countries.

This can result in a costly mismatch between the regulated, "official" level of risk and the actual level of risk for investment in EMDEs. Various steps can be taken to ensure that financial supervisory agencies apply rules in a way that avoids these pitfalls, freeing up capital.

Recent publications from the Global Emerging Markets Risk Database (a joint initiative of public development finance institutions) show that when development finance institutions back loans to EMDEs, capital recovery rates exceed most global benchmarks, and that default rates on these loans are equivalent to those of many firms in advanced economies.

Default rates are also much lower than is typically assumed when these institutions support loans to private sector firms in low-income countries. Granular historical data is increasingly being used by financial market actors in their risk assessments. Used at scale, this evidence can help bring down the cost of investing in developing-economy resilience, enabling an increase in climate finance flows.

Integrating climate into economic management

Finance ministries around the world are aware of the economic challenges posed by climate change and are actively working on solutions. The Coalition of Finance Ministers for Climate Action, co-chaired by Uganda and Croatia and with a membership of 103 countries, agreed a comprehensive work plan earlier this year. The plan aims to systematically integrate climate change into countries' economic management, including through closer work with central banks and regulators from around the world.

The need for such a comprehensive approach to integrating climate into economic management has never been more urgent. Concerted efforts offer an important opportunity to support and enable the achievement of every Sustainable Development Goal. ■

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A displaced family in North Darfur, Sudan in January 2026.
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Inequality is the defining challenge of our time

Inequality is undermining progress across the SDGs, distorting economies, politics, and societies alike. Tackling it will require structural economic transformation, political will, and stronger global coordination

By Adriana E. Abdenur, Co-President, Global Fund for a New Economy; former Special Advisor on international affairs, Brazilian Presidency; member, Founding Committee of the International Panel on Inequality

In 2025, under the presidency of South Africa, the G20 took a notable step by establishing an Extraordinary Committee on Inequality. Its mandate was clear: to assess the scale, drivers, and consequences of rising inequality, and to identify pathways for coordinated action. The committee's report, presented at the Johannesburg Summit, leaves little room for ambiguity. Inequality is no longer a secondary concern or a byproduct of economic growth. It has reached the level of a systemic emergency, one that cuts across countries and generations, and is deeply shaped by political choices and power relations.

The report highlights stark trends. Wealth inequality has reached extraordinarily high levels, with the top 1% capturing around 40% of all new wealth generated globally since 2000, while the bottom half captured just 1%. Income inequality remains high within most countries and significant across countries. Disparities in access to opportunities, such as education, healthcare, and economic mobility, continue to pose major challenges.

◂ Informal housing in Panama City against the backdrop of affluent apartment blocks and the city's financial district

These dynamics are not only economic – they shape political power, erode institutional trust, and affect the capacity of societies to respond to crises ranging from financial shocks to climate change. They also intersect with longstanding inequalities across race, gender, and class, reinforcing patterns of exclusion.

This matters directly for Sustainable Development Goal (SDG) 10, which focuses on reduced inequalities. But the implications go far beyond a single goal. Inequality is a cross-cutting structural issue that influences progress across the entire SDG framework – from poverty reduction to health, education, gender equality, and climate action. Whether framed through the SDGs or broader national development strategies, inequality shapes the feasibility of achieving sustained and inclusive progress. Without addressing it, gains risk being partial, uneven, and ultimately reversible.

A structural shift in the global economy

At the heart of the inequality challenge is a deeper transformation in how economies generate and distribute value. Over recent decades, the balance between returns to capital and returns to labor has shifted markedly. Economic growth has increasingly rewarded ownership of financial assets, intellectual property, digital infrastructure and natural resources, while wages have stagnated or grown more slowly for large segments of the population.

This shift reflects broader changes in how the global economy is organized, particularly the increasing concentration of firms and the expansion of financialized models, in which economic activity is increasingly shaped by financial markets and returns. In many sectors, this has translated into greater control over markets and supply chains, as well as increased influence over regulatory environments, reinforcing existing inequalities. Increasing concentration has raised concerns not only about inequality, but also about its broader effects on innovation, democratic accountability, and the ability of smaller firms and workers to participate on fair terms in the economy.

The rise of artificial intelligence (AI) is likely to accelerate these dynamics. AI systems depend on large-scale data and significant computational resources – assets that are already concentrated among a small number of firms and countries. As AI becomes embedded across the economy, there is a risk that it will further increase the share of income accruing to capital while transforming labor markets. These impacts are unlikely to be evenly distributed, and may deepen existing inequalities along lines of income, geography, race, and gender.

At the same time, AI raises fundamental questions about ownership and how the gains from productivity are distributed. For instance, recent evidence from Europe suggests that AI innovation may already be contributing to a declining labor share of income, with gains accruing disproportionately to capital owners and uneven effects across workers and regions.

Drivers and consequences

The drivers of inequality are complex and deeply interconnected, reflecting both longstanding structural factors and more recent economic transformations. Some of these dynamics are rooted in historical processes, including colonialism and its enduring legacies, which continue to shape patterns of wealth distribution and global economic hierarchies. Others are more contemporary, linked to technological change, increasing market concentration, and shifts in the balance of power between capital and labor – as well as weaknesses in global governance frameworks that have struggled to keep pace with the scale and transnational nature of economic power.

In many countries, labor market institutions have weakened over time, reducing workers' bargaining power and contributing to a decoupling between productivity and wage growth. At the same time, tax systems have often become less progressive, with relatively lower effective taxation of capital income and wealth. At the international level, gaps in coordination have enabled profit shifting, tax avoidance, and regulatory arbitrage (exploiting differences between regulatory regimes), limiting governments' ability to mobilize resources and address inequality. Together, these factors reinforce a pattern in which economic gains are unevenly distributed both within and across countries.

The consequences are equally far-reaching. High levels of inequality can dampen economic growth by limiting aggregate demand – overall spending in the economy – and reducing investment in human capital. While earlier economic orthodoxy often assumed that inequality was a necessary trade-off for growth – on the grounds that higher returns to capital would drive investment – more recent evidence challenges this view. As highlighted in the G20 report, excessive inequality can weaken the foundations of sustained growth by constraining consumption, limiting access to education and opportunity, and reducing the productive potential of large segments of the population. In this sense, inequality is not only a social concern but also an economic one, with consequences for long-term resilience.

Beyond its economic effects, inequality also creates broader systemic risks. Highly unequal systems tend to be more fragile – economically, socially, and politically – particularly in periods of rapid technological and environmental change. In contexts where large segments of the population face persistent exclusion, inequality can contribute to social unrest and increase the risk of conflict, especially when combined with weak institutions or economic shocks.

For instance, the OECD 2025 States of Fragility report underscores inequality as part of the cycles driving conflict and stability. For this reason, concerns about inequality are increasingly being

framed not only in terms of fairness, but also in terms of resilience and conflict prevention.

Inequality also erodes social cohesion and trust in institutions, contributing to political polarization and instability. When economic power becomes highly concentrated, it can translate into disproportionate political influence, shaping public debate, policy priorities, and the functioning of democratic processes. This can weaken institutional accountability and deepen perceptions of exclusion among large segments of the population.

These dynamics are not only the result of structural trends, but also of political choices and competing interests. Efforts to reduce inequality often encounter resistance from actors who benefit from existing arrangements, making reform as much a question of power and political economy as of policy design. Recent political economy research argues that inequality often persists because powerful economic actors are able to shape policy processes and media narratives in ways that protect existing distributions of wealth and power.

Inequality also shapes environmental outcomes: unequal societies often face greater barriers to building consensus around climate action, while the costs of environmental degradation tend to fall disproportionately on those with the least capacity to absorb them. Recent studies suggest that perceptions of unfairness and unequal burdens can weaken public support for climate cooperation and generate backlash against climate policies, underscoring the close relationship between inequality and effective climate action. In this sense, inequality is not just one challenge among many – it is a force multiplier that exacerbates other crises and undermines the foundations of inclusive and democratic governance.

From national responses to global coordination

Addressing inequality requires a combination of policies operating at different levels. At the country level, governments can adopt policies that directly influence income and wealth distribution. These include progressive taxation, strengthened labor protections, expanded social protection systems, and investments in public services such as education, healthcare, transportation and housing. Green industrial policies can also play a role by shaping the direction of economic transformation and ensuring that new technologies contribute to inclusive growth.

It is also useful to distinguish between downstream and upstream approaches. Downstream policies – such as social transfers and safety nets – are essential for reducing deprivation and protecting livelihoods. In some contexts, they can also contribute to broader social and economic transformation, although on their own they may be insufficient to address the structural drivers of inequality. Upstream policies focus on the underlying structures that generate inequality, including corporate governance, competition policy, labor market institutions, and the rules governing digital and data-driven economies.

At the international level, some degree of coordination remains necessary. Many of the forces driving inequality – such as tax avoidance and the rules governing cross-border economic activity – extend beyond national borders, and purely domestic approaches are often insufficient in highly integrated global systems. In the absence of coordination, countries can face reduced policy autonomy, as tax bases erode and economic decisions are increasingly shaped by external pressures rather than domestic priorities.

The case for a permanent global platform

Despite growing recognition of the issue, existing governance structures have struggled to keep pace with the complexity and urgency of inequality. In this context, the G20 Extraordinary Committee on Inequality has proposed the establishment of an International Panel on Inequality (IPI) as a way to strengthen the global response.

The IPI would provide a permanent, independent platform to generate comparable data and analysis, helping countries make more informed decisions in a complex and rapidly changing global environment. Drawing on experts from multiple disciplines and regions, it would help fill critical data gaps and translate research into actionable insights. Importantly, the initiative already has the backing of a diverse group of countries, including South Africa, Brazil, Spain, and Norway – reflecting both Global South and Global North perspectives.

From recognition to action

The establishment of the committee – now transformed into the Founding Committee of the IPI – marks an important step. But recognition must be followed by sustained action. Achieving the SDGs – or broader national development objectives – requires structural change in how economies are organized and how value is distributed. Inequality sits at the center of this transformation.

This is particularly critical as the international community starts looking beyond 2030. The next phase of the global development agenda will need to grapple more directly with structural drivers of economic outcomes. Without this shift, progress will remain uneven and reversible. The rapid rise of AI and other transformative technologies reinforces this urgency, as they have the potential either to widen inequalities or to support more inclusive growth, depending on how they are governed. These dynamics must be front of mind for an incoming UN Secretary-General.

In a more fragmented world, progress will depend not only on new frameworks, but also on the ability to adapt existing institutions and policies – even without full global consensus. The question is no longer whether inequality matters. It is whether governments are willing to confront the structural forces that sustain it – and to do so in a context where global cooperation itself is under increasing strain. ■

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Removing restrictive gender norms through education

Education can be a powerful force for shifting unequal gender norms, but schools do not transform them automatically. Embedding gender equality in education systems at scale – and defending that work against growing backlash – requires sustained political commitment, institutional reform, and public support

By Rachel Marcus, Senior Research Fellow, Gender Equality and Social Inclusion, ODI Global

"There is nothing more transformative and irreversible than education. There is no public policy, there is no court ruling, there is no law, there is no government that is more transformative than education. So, if you hinder education with a gender focus, you are hindering the advancement of the rights of these historically marginalized groups." (NGO founder and gender expert, quoted in ALiGN's report on teacher training and gender equity in Colombia.)

At its best, education has unique potential to transform unequal and discriminatory gender norms. One of its key purposes is to open minds to new knowledge and ideas. It is largely provided at a life stage when learning is most rapid, and when children and

▲ Women attend an accounting course in Damascus, Syria, as part of a program to provide young people with market-relevant skills

young people are intensely socialized into the gender norms deemed appropriate in their societies – by family, peers, teachers, and others.

As rates of participation in primary and secondary education have risen over recent decades, so has the promise of education as a powerful tool for transforming gender norms at a scale and depth hard to match by approaches such as media campaigns or legal change. That said, 273 million children and young people worldwide remain out-of-school. That number reminds us that transforming gender norms through education requires focused attention to extending access to children missing out, and to establishing lifelong learning opportunities.

A wealth of evidence has established the relationship between education for both girls and boys – particularly secondary or post-secondary education – and social wellbeing outcomes, such as enhanced public health and reduced child marriage. But at the same time, schools often reinforce dominant gender norms, as much through the "hidden curriculum" – the values and norms that are transmitted through everyday practices – as through the formal curriculum.

For example, teachers' expectations can lead to young people being channeled into certain areas of study based on their gender. Alongside gender norms in wider society, this contributes to the under-representation of women in science – in fields such as scientific research (where globally women account for 31% of researchers) and engineering (where globally women constitute 28% of graduates). Likewise, men are under-represented in fields such as education (where women make up 85% of pre-primary teachers) and healthcare (where women constitute 67% of the global health workforce, though only 25% of leaders). Additionally, students' policing of one another's compliance with stereotypical gender norms can lead to sexist and homophobic bullying, both in person and on social media.

Embedding gender equality into school curricula and practices

Exposure to new information and ways of thinking, and to people with different perspectives – both teachers and peers – can open horizons and lead to shifts in students' attitudes, values, and behavior. It can build self-confidence, aspirations, and determination – key dimensions of empowerment. This can occur even without dedicated curriculum content on gender equality, as students are exposed to scientific, historical, or other information that challenges gender preconceptions. This empowering potential is far more likely to be realized where education is high quality – as Sustainable Development Goal (SDG) 4 emphasizes – and when children's rights to freedom from hunger (SDG 2), good health (SDG 3), clean water (SDG 6), and safety (SDG 16) are also met.

However, and as recognized in SDG Target 4.7 (knowledge and skills for sustainable development), a growing body of evidence suggests there is added value in an intentional focus on nurturing gender-equitable values through education. Initiatives dedicated to doing so have blossomed worldwide in recent years. Though hugely diverse in scope and scale (from one-day workshops to multi-year embedded curricula), effective initiatives typically:

- deploy student-centered pedagogies and encourage students to think critically about gender norms in their families and communities (including at school)
- inspire students to identify ways they can challenge unequal norms and practice – for example, intervening if they witness sexual harassment, or advocating for fairer divisions of labor within the household. In doing so they can help students move beyond changes to individual attitudes to more collective, societal change
- back up in-class initiatives with outreach to families and a whole school approach – this involves:
  - building a vision and ethos that emphasizes all students flourishing
  - "auditing" a school's procedures and practices to make sure they promote fairness and equality
  - training all staff (not just teachers) to be able to reinforce these values

Though few initiatives are evaluated, evidence from India shows they can have a lasting effect on attitudes. For example, a two-year life skills course for 12 to 14-year-olds in the public education system of India's Haryana state led to a 16 percentage point increase in support for gender equality among participants, which persisted for at least two years after the end of the course.

Transforming education systems at scale requires action on curricula and learning materials, as well as embedding content on teaching for gender equality in teacher education. An ODI Global study on nurturing gender-equitable masculinities found that successful scale-up of new curricula and learning resources often requires compromise so that content can be fitted into existing

"Teachers' expectations can lead to young people being channeled into certain areas of study based on their gender… this contributes to the under-representation of women in science – in fields such as scientific research and engineering

curriculum frameworks. Designing learning materials so they can easily be adapted to diverse local contexts is also essential. Additionally, effective scale-up often requires a staged roll-out that takes into account lessons from initial implementation. Key actions at different levels of an education system are summarized in the diagram below.

Challenges – and strategies for overcoming them

Although education has strong potential to positively influence gender norms, it also faces significant challenges. Recent global surveys suggest declining support for gender equality among young men. This may be driven by misogynistic online content producers targeting boys and men who feel economically, socially, or politically disenfranchised, and who blame women or feminism for their situation.

Related narratives contest the idea that schools should play a role in nurturing support for gender equality. Longstanding resistance to schools teaching gender-related content has been mobilized by increasingly organized and widespread political campaigns. These sometimes include threats to teachers who encourage students to think critically about gender or racial inequalities, or school administrations that explicitly promote human rights-based values.

Such campaigns also target both national political processes and international norm-setting bodies, seeking to end support for subjects like life skills or sex and relationships education where content on gender equality is often taught. These campaigns are well-funded, supported by dominant media ecosystems, and often misrepresent actual or proposed policies (see ODI Global's note on norm-spoiling at the UN).

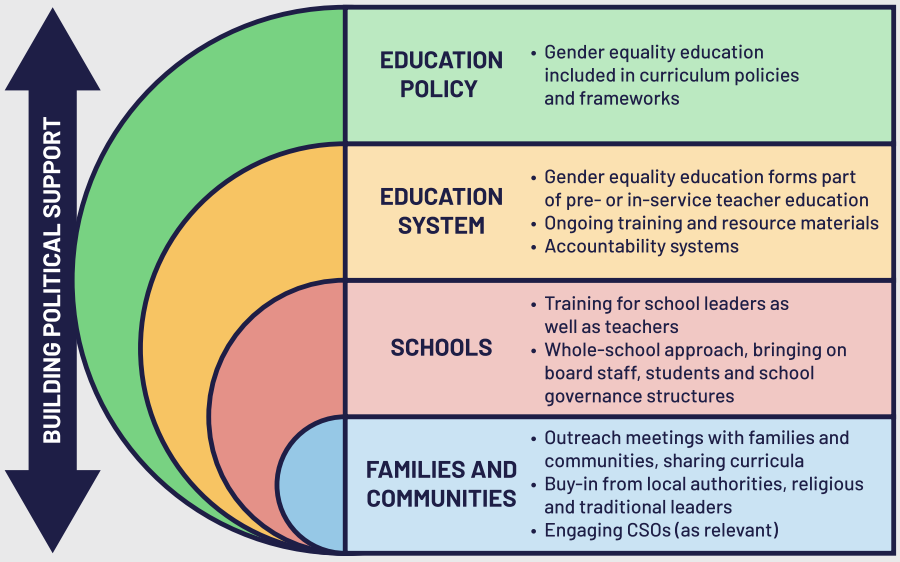
Investing in critical digital and media literacy skills for both young people and adults is a key "social inoculation" strategy – a way of building resilience to counter gendered and other forms of disinformation. It should be embedded in school education as well as lifelong learning and adult literacy programs. This is especially critical in an era when AI deepfakes can be generated instantaneously and are amplified by algorithms designed to spread polarizing material. Community-level outreach that shows what children are actually learning in relation to contentious issues can help dispel rumors and deliberate misinformation.

Conclusion

Realizing education's potential to help create a more gender-equal world requires investment in extending quality educational opportunities, both formal and non-formal, for all children and adults. It also means strengthening the inclusion of gender equality, human-rights-based teaching, and critical digital skills at all stages of education.

As the forces that seek to roll back gender equality and human rights gather political momentum, mobilizing the political will and resources to invest in the transformative power of education has never been more critical. ■

FIGURE 1: Entry points for strengthening supportive education 'ecosystems'



Source: Marcus et al (2024), Nurturing gender-equitable masculinities: lessons for transforming norms through education systems, ALiGN/ODI Global, London

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The cost of motherhood and the gender pay gap

Motherhood still comes with a pay penalty, and women continue to be paid less for work of equal value – not by accident, but by design. Tackling these injustices means changing how pay is set and progression is measured and rewarded – through transparency, enforcement, and stronger worker protections

By Jocelyn Chu, Programme Specialist in Economic Empowerment, UN Women

The many catchphrases about women and work – "lean in," "have it all," "girlboss" – suggest that success at paid work and in life depends on women doing more, stretching further, and balancing better to juggle unpaid care and domestic work, and paid work. That is, women are expected to log extra hours after bedtime or even breastfeed while voting in parliaments. But these catchphrases are built on a flawed premise: that it's simply up to women to "lean in" if they want to "have it all" – and to succeed as spouses, mothers, workers, and employers.

The reality is that the systems shaping our economies undervalue women's work, whether in the home or at the office. This is not about isolated stories of missed promotions. The evidence is consistent. Across all countries and regions, women remain more likely than men to be in more insecure, lower-paid work and to perform two and half times

◂A glimpse of what's possible under a fairer social system: Sanna Marin (center) was elected as Prime Minister of Finland in 2019 when her daughter was not yet two. She is pictured here with the leaders of her government's coalition partner parties, who were the ministers for finance, education, justice, and the interior

more unpaid care and domestic work than men.

Globally, the gender pay gap remains at 20%, and this gap widens for those facing multiple and intersecting forms of discrimination. This is not accidental – it is structural. Across countries and sectors, women are paid less for the same work, and the gap widens after marriage and motherhood.

For the Equal Pay International Coalition (EPIC), co-led by the International Labour Organization (ILO), the Organisation for Economic Co-operation and Development (OECD), and UN Women, the gender pay gap is not a trivial labor market imbalance; it is a structural inequality that characterizes all economies, a gendered inequality that undermines labor rights and sustainable development.

Indeed, achieving equal pay for work of equal value is affirmed in international labor standards, notably ILO Convention C100 and in Target 8.5 of the Sustainable Development Goals (SDGs). Lower wages for women mean higher poverty rates, weaker social protection coverage – such as through pensions – and greater financial insecurity, particularly during crises or conflicts. The gender pay gap threatens multiple SDGs, including ending poverty (SDG 1), gender equality (SDG 5), decent work (SDG 8), and reducing inequality (SDG 10). Closing the gender pay gap is thus central to realizing the promise of the 2030 Agenda and women's economic justice and rights.

Unequal pay: an enduring inequality

Nevertheless, structural change for women and the world of work is possible. ILO Convention C190 on violence and harassment in the world of work – adopted in 2019 – has become the fastest-ratified ILO convention of the past decade. It has led to significant changes in national legislation and policies in the 2020s, such as the prohibition of sexual harassment in the workplace. At the same time, national legislation has expanded maternity and paternity leave. In fact, the gender pay gap itself has slightly decreased – although mainly in high-income countries. Yet significant and stubborn pay inequality remains, even in high-income countries and even when analyses are adjusted for age, education, and experience.

Why is this? Segregation across sectors is one reason. Agriculture, education, healthcare, and care services, for instance, have higher shares of women workers than better-paid fields like science, technology, engineering, and math (STEM), finance, and construction. The gender pay gap is also reflected in who is recruited into secure, well-paid jobs, and who remains on precarious contracts or in the informal economy. In fact, ILO data from 2023 finds that in most countries, women outnumber men in informal employment. Meanwhile, occupational segregation influences those who are hired for lower wage, "feminized" jobs, like administrative assistants, versus more technical or managerial and higher-paid roles that are usually filled by men. Sticky floors – women's concentration in low-paid, low-mobility jobs with little chance of advancement – keep women's wages low. Meanwhile, glass ceilings – the invisible barriers that prevent women from reaching senior and leadership positions – block women's advancement.

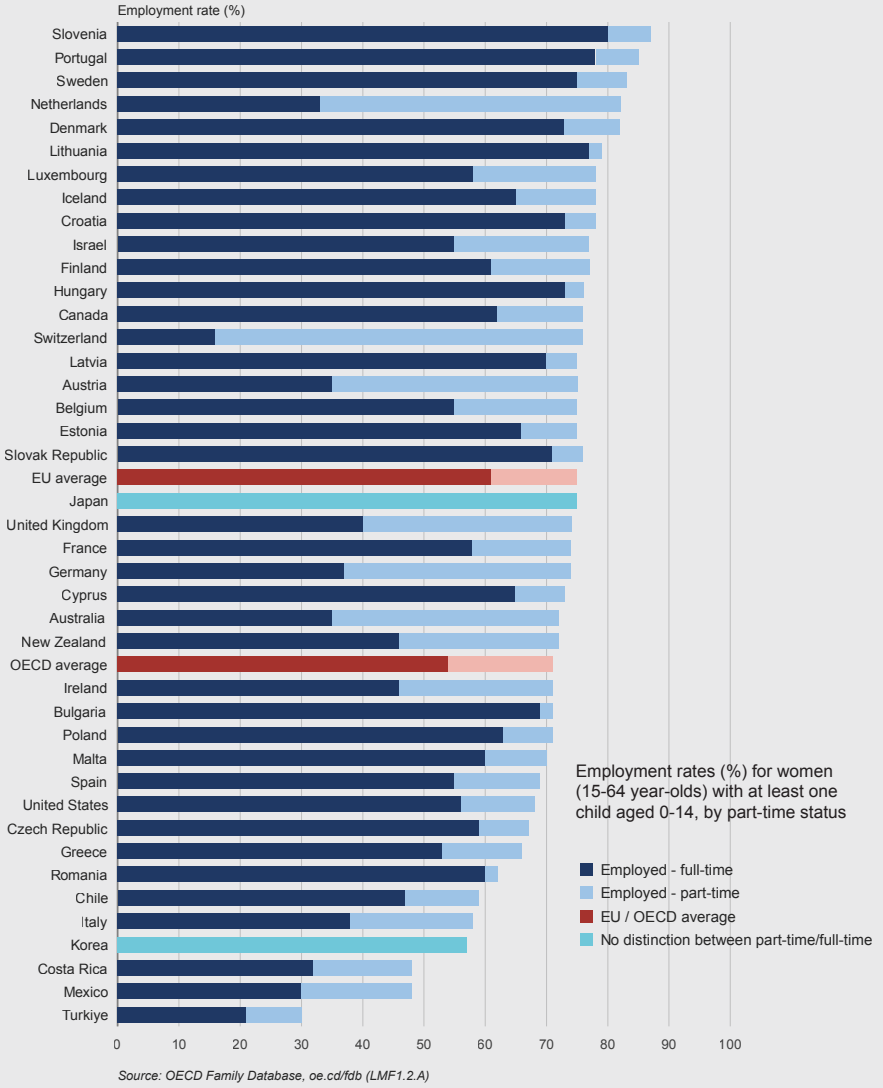
Indeed, most of the gender pay gap in 20 OECD countries is due to pay differences within firms, stemming from unequal tasks and responsibilities, and discrimination. Gendered differences exist between who is promoted into management and who is assumed to be "not quite ready;" between whose time is assumed to be limitless for work demands and whose time is constrained. Claudia Goldin, a Harvard University professor and winner of the Nobel Prize in Economics in 2023, posits that "greedy jobs" that require inflexible, longer hours are higher paid – and largely filled by men.

The price of having children

The disproportionate share of men in "greedy jobs" is not surprising. Working women's unpaid care and domestic work responsibilities, especially the care of children, constrain their prospects and limit their economic mobility.

Having children does not somehow make women less skilled or less motivated. Most economies still operate on the assumption that someone in the household will provide unpaid care – feeding, bathing, supervising homework, tending to elderly parents – and that this someone is a woman. Once children arrive, women are more likely to reduce hours, move to part-time work, or step out of the labor force

FIGURE 1:
Maternal employment rates, 2021 or latest available year



Source: OECD Family Database, oe.cd/fdb (LMF1.2.A)

altogether. In other words, they suffer a motherhood penalty: the financial demotion women take when they have children. Employers, in turn, may deem mothers as less committed or having less "leadership material," whereas men are rewarded. Fatherhood frequently coincides with higher pay, termed the "fatherhood premium," as employers choose to see parenthood for men as a sign of stability and dedication.

No one solution

The gender pay gap results from inequalities entrenched in economic and social systems. So, to address it, we need multiple, holistic, and interconnected approaches.

Take pay transparency, popularized by the European Union Pay Transparency Directive, which mandates that its member states pass binding regulations, such as the right for workers to request pay data. Pay transparency, combined with robust job evaluation methods, forces organizations to confront uncomfortable remuneration differences between employees performing work of equal value. Recommended legal reform also includes placing the onus on the employer to prove that pay scales reflect equal pay for work of equal value – rather than having workers bear the burden of needing to prove pay discrimination in court.

Or consider parental leave for both parents. When maternity leave entitlements are not matched with parental leave for fathers, it bolsters the expectation that women will step back and men will step up at work. Designing leave that is non-transferable for both parents may shift norms so that men spend more time caring and women are more likely to return earlier to full-time work. Likewise, instead of urging women to "lean in," governments and employers should cultivate and mandate supportive organizational workplace cultures, including flexible and family-oriented working arrangements.

Raising minimum wages has also proven to be effective in narrowing the gender pay gap, as women are often concentrated in lower-paying roles. Strengthening the role of collective bargaining through unions is similarly beneficial by reducing the scope for discretionary pay-setting that can reproduce gender bias. Collective bargaining can also be a powerful vehicle for negotiating family-friendly policies, including protections for part-time or care workers, who are disproportionately women. Unions can also amplify individual workers' bargaining power, making it easier to challenge pay discrimination without fear of retaliation.

Whether or not we make these structural shifts will answer an important question: do we see care as a private, domestic matter to be quietly shouldered by women with high costs for their wellbeing and economic participation, or essential for any functioning household, society, and economy? If the latter, this requires not only women, but everyone – from governments to employers to fathers – to step up, and in multiple ways. Indeed, the gender pay gap and the motherhood penalty are not inevitable. They are the predictable outcomes of discriminatory norms and institutions that we have created – and that we can collectively rebuild. ■

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When work separates mothers and babies, everyone pays the price

Mothers are encouraged to breastfeed, yet too often expected to do so within work systems built around separation. If we want to improve breastfeeding rates, those systems must change

By Geraldine Anup-Willcocks, International Board Certified Lactation Consultant and Principal Humanitarian Adviser at UNICEF UK

This article uses the terms "mothers" and "breastfeeding" for clarity, reflecting common usage, but recognises that parents define their identities and caregiving in diverse ways. While not all parents are able or choose to breastfeed, enabling responsive caregiving – including supporting closeness between caregivers and infants – is essential for all children's wellbeing, and experiences of separation can vary widely.

In a tribal village in India my colleague rushed to the school door, smoothed her sari, and gently passed her baby to the school cook, who settled at the back of the classroom with wooden blocks. She strode to the front. The children stood to greet her in unison, ready for maths.

Across the world, the picture often looks very different. A mother stands on a train, pulled further away from the baby her body and mind are wired to stay close to. She worries through the day – will he take her expressed milk? What will this separation mean for him? Breastfeeding is far more than milk – it is comfort, regulation, immunity and bond. Yet, as workplaces demand presence, it is treated as something that can be scheduled, replaced, or quietly dropped.

Why breastfeeding support matters

For centuries in societies like Britain, separating mothers and babies was not an accident – it was designed. From wet-nursing and industrialisation that pushed women and children apart for

▲ A mother transports her baby through Amsterdam. Among EU countries, the Netherlands has a high rate of maternal employment that relies heavily on part-time working. Dutch law entitles paid breaks for breastfeeding in the 9 months after birth

economic survival, through to aggressive marketing of breastmilk substitutes and pumps, each era reinforced the idea that maternal care could be outsourced.

Today, that legacy persists in modern work structures that promote breastfeeding in theory but make proximity between mothers and babies almost impossible in practice.

At each stage, the message has shifted – but the outcome has stayed the same: mothers and babies are expected to adapt to separation, rather than work adapting to support the closeness that babies need.

But we know more now. Science has shown the critical role of responsive nurturing in the early years for both mother and child. Yet we continue to ignore it.

Breastfeeding provides superior nutrition, adapting with every feed to the nutritional and immunological requirements of a child. It helps protect against a range of illnesses, including the leading causes of death in children under five. For mothers, the postnatal period also carries significant mental health risks: the World Health Organization (WHO) estimates that around one in eight women who have recently given birth experience a mental disorder, primarily depression, with higher rates in developing countries. Yet breastfeeding is one of the most protective factors.

The WHO reports that breast cancer remains the most common cancer among women worldwide and the second most common cancer overall. Yet each year a mother breastfeeds, her risk of developing invasive breast cancer is reduced by 6 percent. Breastfeeding may also support craniofacial development, protecting children from ear and breathing disorders and dental problems.

The impact on physical health is profound: increasing breastfeeding rates to near universal levels could prevent 823,000 deaths in children under five and 20,000 maternal deaths each year.

The mental health implications are also important. In the context of a global children's mental health crisis, where one in seven children is affected, responsive caregiving shapes the brain and regulates stress responses. Prolonged separation can activate infants' stress systems, and has been linked to poorer emotional, cognitive, and behavioral outcomes later in life. Instinctively, most mothers feel this when they return to work away from their child – and we ignore this at our peril.

Anthropological research suggests that, from an evolutionary perspective, the natural weaning age for humans may be between two-and-a-half and seven years. WHO recommends breastfeeding up to two years of age or beyond, with breastmilk continuing to provide up to a third of a child's nutritional needs in the second year of life, alongside immunological and developmental benefits. It's therefore critical that mothers are still able to breastfeed and nurture their children after the first year of life to ensure every child's right to the best possible health (Article 24 of the UN Convention on the Rights of the Child). A mother is biologically primed to care for her young – her body produces milk to nurture and protect her child, and her presence is not something that can simply be substituted with a nursery and a pump.

The gap between policy and practice

So, are we making this possible? In the UK, 74.2% of mothers with children aged 14 or under are in employment, and many other countries are seeing a similar pattern. Yet only around 1% of babies in the UK are exclusively breastfed at six months as per recommendations – meaning they receive only breastmilk, with no formula, water or solids – and at 12 months breastfeeding becomes exceptionally rare. WHO highlights a lack of supportive environments – particularly in the workplace – as an important driver of this decline.

As a lactation consultant, I am often asked by conflicted mothers facing difficult choices about stopping or reducing breastfeeding while their babies are still very young. I see families encouraged to rely on pumping as a substitute for breastfeeding, which can increase stress for the dyad and commonly leads to problems such as mastitis, child illness, and early weaning. I hear about breastfeeding rooms designed for pumping, but not for feeding babies directly. In practice, going to work often means separation, reduced or stopped breastfeeding, and pressure on families to adapt to existing systems rather than systems adapting to babies' needs.

In many countries, return-to-office policies are adding pressure, with women often disproportionately affected. Mothers of young children are the hardest hit, and breastfeeding mothers are being asked to spend long hours away from their child while managing the consequences alone.

What this reveals is a deeper issue: our systems are designed to help mothers manage separation, rather than to avoid it in the first place.

The current push for return to office working is intensifying this pressure. Widely acknowledged to affect women disproportionately, it places the greatest burden on mothers of young and breastfeeding children – who are expected to absorb the consequences alone.

Yet separation is rarely as inevitable as we assume. In Rwanda, UNICEF offices include spaces where babies can remain close, with carers supporting mothers between feeds. In South Sudan, babies stay with their mothers as they work in hospital compounds. At the United Nations General Assembly, Jacinda Ardern brought her baby in a sling; in the Australian parliament, Larissa Waters breastfed while speaking.

These are not anomalies of biology – but examples of different choices in system design.

Babies' needs do not change from one workplace or country to another. The difference is that some systems have normalized mother-baby separation. If women work,

young children will need care – but the assumption that work and proximity cannot coexist is a cultural and policy choice, not a biological inevitability.

Many governments have committed to improving breastfeeding rates and upholding children's right to health. But current systems place responsibility on the individual. Legal protections focus on preventing discrimination, not enabling breastfeeding, and there is often no requirement to support proximity between mothers and babies. Asking a mother to prioritise breastfeeding without allowing her to be with her child is like asking a plant to thrive while removing it from sunlight.

What needs to change

There is a clear structural solution – and one that would support several Sustainable Development Goals (SDGs). Laws and workplace policies must place responsibility on employers to enable breastfeeding, rather than leaving mothers to justify their children's biological needs. To genuinely promote and protect breastfeeding, we need to move away from models that normalize separation and instead support proximity between mothers and children.

If children are to realize their right to the best possible health, workplaces, governments, and societies must use their resources to help mothers combine paid work with responsive care. This means focusing on three core areas:

1. Redesign work to keep mothers and babies close

Workplaces must shift from assuming separation to enabling proximity wherever possible. This includes flexible and remote work, job-sharing, adjusted schedules, and, where needed, on-site or near-site childcare to support responsive feeding.

This would support SDG 5 on gender equality, SDG 8 on decent work and economic growth, and SDG 3 on good health and well-being.

2. Make workplace support a legal duty

Governments should go beyond non-discrimination and introduce clear legal obligations on employers to support continued breastfeeding. This includes:

- the right to flexible and remote work for mothers during early childhood
- requirements to enable breastfeeding (not just expressing)
- protection from unnecessary separation

Investing in breastfeeding support is not a cost – it is a high-return economic intervention. It reduces employer costs through improved retention and productivity, while globally, inadequate breastfeeding is already driving over US$340 billion in avoidable healthcare costs and lost economic output each year.

For policymakers, the choice is stark: in the context of ageing populations and declining birth rates, investing in early childhood and maternal support is not optional – it is a foundational strategy to sustain health systems, protect human capital, and secure long-term economic resilience.

This would support SDG 3 and SDG 10 on reduced inequalities.

3. Treat breastfeeding as a systems issue

Health systems, employers, and policymakers must stop placing responsibility on mothers alone.

© Sara Matthieu

▲ The Belgian MEP, Sara Matthieu, breastfeeds her baby on the train to the European Parliament in Strasbourg. Earlier this year, European electoral law was amended to allow proxy voting for MEPs, who are pregnant or in early motherhood

Healthcare professionals and global actors, including the UN, WHO, and UNICEF, should explicitly advocate for structural change, including workplace reform and social protection.

This would support SDG 2 on zero hunger, SDG 3, and SDG 5.

A system that works for mothers and children

If we want to improve breastfeeding rates globally, we must stop asking mothers to adapt to systems that were never designed for them – and start reshaping those systems around the needs of mothers and children.

At the end of the day, my colleague collected her sleeping baby from the school cook, tucked him into her sari, and walked home – having spent the day both teaching and nurturing. That should not feel exceptional. It should feel possible.

Because every mother should be able to work without being forced into an unnecessary choice – and every child deserves to grow in the closeness they need to thrive. ■

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Employment that empowers women

Work can liberate women and transform societies, but employment alone is not enough. As digital, green, and demographic transitions reshape labor markets, the challenge is to ensure that every woman has access to decent work, rights, security, and opportunity

By Chidi King, Branch Chief, Gender, Equality, Diversity and Inclusion, International Labour Organization

Employment has long been recognized as one of the most powerful drivers of women's autonomy and independence, and of social transformation. However, the liberating potential of work depends not simply on whether women are employed, but on the quality and security of the jobs they hold. Work liberates women only when it is decent work: work that is freely chosen, fairly remunerated, protected by rights, supported by social protection, underpinned by workers' ability to organize and express their concerns, and accompanied by opportunities for personal development and social participation.

Decent work liberates women by strengthening their agency and expanding their life choices. When women earn an adequate and reliable income, they gain greater control over household resources and decision-making.

This financial autonomy can reduce dependence on family members or partners and strengthen women's capacity to invest in their own

◂ Women being trained as agricultural drone pilots under the Indian government's Namo Drone Didi scheme. The training is provided by women-led self help groups

education, health, and well-being, as well as that of their children.

Decent work also gives women access to social protection – including maternity and parental benefits, healthcare, pensions, and unemployment protection – reducing vulnerability during moments such as parenthood, illness, job loss, and old age. Such employment further creates opportunities for women to develop skills, exercise leadership, participate in social dialogue, and contribute to public life. Through decent work, women become active agents of economic and social change.

Progress without equality

In recent decades, women have made significant gains in education and in labor force participation. But these gains have not translated into gender equality in practice at work.

Globally, women's labor force participation stands at 48%, well below men's 73%. Among young people, the gap is also pronounced: 26.7% of young women are not in employment, education, or training (NEET), compared with around 7.9% of young men. Women hold just 30% of managerial positions and, on average, earn 78 cents for every dollar earned by men. For women from marginalized backgrounds, these inequalities are even more stark.

For women in many parts of the world, work still means the informal economy. That often brings insecurity, few rights at work, little or no social protection, long hours, and low pay or income.

Entrenched structural barriers are constraining women's access to decent work, as well as their ability to remain in the workforce and advance in their careers. For example, women still spend significantly more time than men performing unpaid care and domestic work, limiting their opportunities for paid employment and career advancement.

Occupational and sectoral segregation remains widespread, with women concentrated in vital but lower-paid sectors such as care, education, and social services, while remaining underrepresented in high-growth sectors such as technology, engineering, and energy.

For many women, science, technology, engineering, and mathematics (STEM) education and lifelong learning remain out of reach. Discrimination, violence, and harassment also continue to undermine women's opportunities, safety, health, and dignity at work.

The links between work and women's reproductive health over the life course are gaining attention, but they remain misunderstood and often treated as "taboo." While every individual experience is different, growing evidence shows that natural life-stage events such as menopause can act as a brake on women's careers, sometimes causing them to exit the workforce altogether, when silence replaces supportive workplace policies.

A transformative agenda for gender equality at work

The International Labour Organization's Transformative Agenda for Gender Equality at Work, first set out in its Centenary Declaration for the Future of Work, moves beyond incremental improvements to address the structural and root causes of gender inequality. Its objectives include:

- ensuring equal pay for work of equal value
- achieving a better work-life balance
- expanding paid care leave and promoting a more equitable sharing of family responsibilities
- investing in the care economy
- supporting employment creation and lifelong learning
- removing legal and social barriers to women's participation
- preventing and addressing gender-based violence and harassment in the world of work

At the 2026 International Labour Conference, ILO constituents revisited the agenda through an ILO discussion paper on gender equality at work, focusing on three broad questions:

- what structural barriers are constraining gender equality in the world of work, and what integrated, evidence-based policy approaches are needed to address their root causes
- how technological, environmental, and demographic transitions can be harnessed to advance gender equality and support inclusive, sustainable development
- what priority actions are needed to promote, advance, and support the agenda in practice

From road map to action

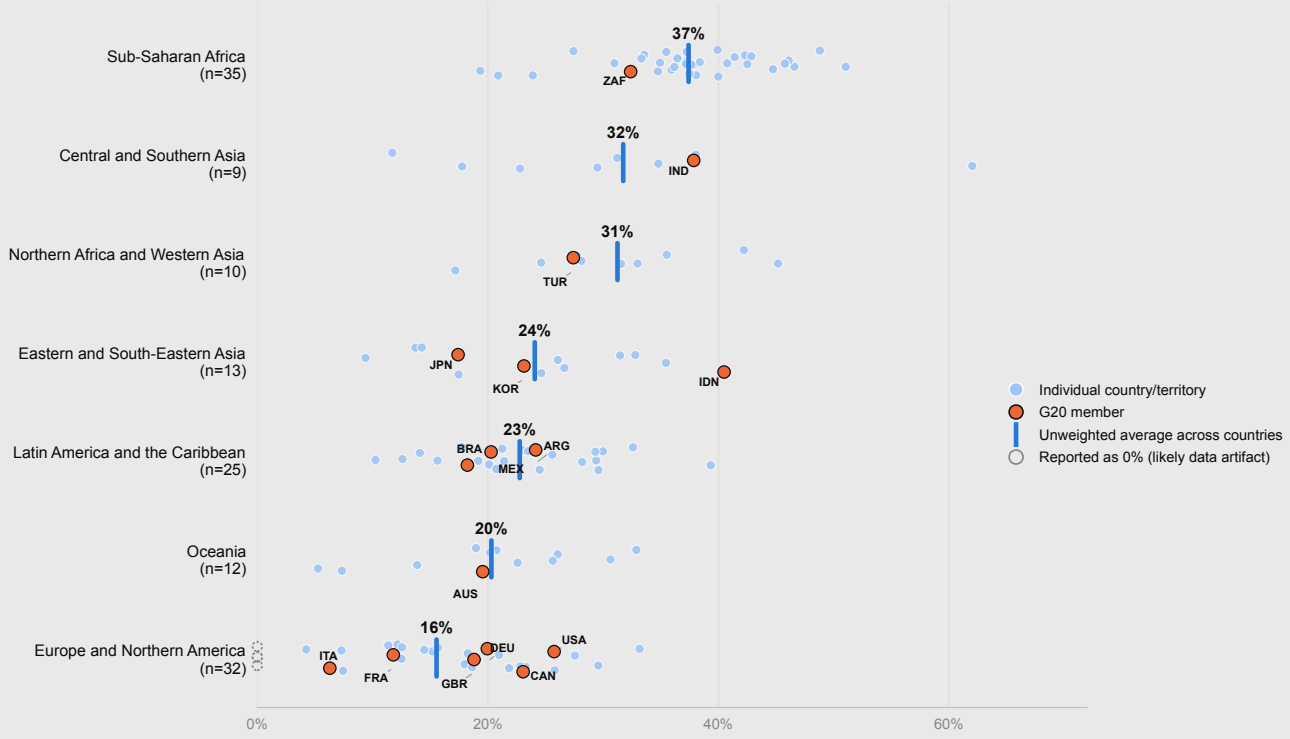
The outcome is a clear and strategic road map, stressing the need for comprehensive, integrated, cross-sectoral, and evidence-based action. It calls for approaches that combine equality frameworks, economic and labor market policies, social protection, care systems, skills policies, institutional capacity-building, and effective enforcement.

The road map urges governments, working with employers' and workers' organizations, to strengthen and enforce laws prohibiting discrimination in recruitment, pay, and promotion, while removing discriminatory laws and policies. It also recognizes the importance of investing in the care economy – a commitment made by the ILO's tripartite constituents at the 2024 International Labour Conference.

It also highlights the need for gender-responsive employment and macroeconomic policies that create decent jobs in traditional and emerging sectors, alongside skills development and lifelong learning. Also essential are gender-responsive occupational health and safety measures that reflect women's different socio-economic backgrounds and identities, as well

FIGURE 1: Women's exposure to low pay, by region

Share of female employees earning below two-thirds of their country's median hourly wage – G20 highlighted. The graph does not capture the large numbers of women in many countries engaged in unpaid work, particularly unpaid care work.



Source: ILOSTAT, low pay rate by sex (indicator EAR_XTLP_SEX_RT_A), sex = female (low pay = hourly earnings below two-thirds of the median); latest year per country, 2000-2026. Regions follow the UN Sustainable Development Goals regional grouping (M49-based). Dots show every individual country/territory with data; the thick mark is the unweighted average, not population-weighted. G20 members are highlighted in orange and labeled with ISO 3166-1 alpha-3 country codes; China, Russia, and Saudi Arabia have no data for this indicator and are not shown. Four countries (Finland, Iceland, Poland, Sweden) report exactly 0% in their latest year via OECD-sourced records with no corroborating detail - shown hollow as a likely data artifact.

as measures to support the transition from informal to formal work, while preventing work from being pushed into informal arrangements.

Transitions that could widen – or close – the gap

The transformations currently reshaping the world of work make these interventions even more urgent. Digitalization and artificial intelligence are changing the nature of jobs and the skills required across sectors. While these technologies have the potential to increase productivity and create new employment opportunities, they may also deepen existing inequalities if structural barriers remain in place and women lack access to digital tools, connectivity, and training. ILO research reveals that women are disproportionately concentrated in occupations vulnerable to automation. Without deliberate action, technological transitions could widen gender gaps rather than narrow them.

The transition to environmentally sustainable economies presents similar challenges and opportunities. Green transitions are creating jobs in renewable energy, sustainable agriculture, environmental services, and other emerging sectors. Yet women remain underrepresented in many of these occupations. Policies that promote women's participation in green skills development, entrepreneurship, and employment are therefore essential, including for women in rural communities.

Demographic change further underscores the importance of gender-responsive labor market policies. Population aging is increasing demand for care. These trends create significant opportunities for employment growth in the care economy but also highlight the need for adequate investment in care infrastructure, social protection, and workforce development. Care systems must be strengthened to ensure that growing care needs do not translate into even greater amounts of unpaid care work for women.

The policy choices made now will either create a generational opportunity to advance gender equality in practice or further embed structural inequalities. Labor markets that are inclusive, equitable, and centered on decent work can liberate women and improve their individual lives. They can also transform societies and economies for the benefit of all. ■

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Women, climate change, and the search for accountability

As climate litigation gathers force, women are helping to redefine what accountability looks like – and exposing how far climate policy still is from delivering gender justice

By Brianna Howell, Research Analyst, UN Women; and Laura Turquet, Policy Advisor and Deputy Chief, Research and Data team, UN Women

When you consider women's access to justice, you most likely think of the quest for accountability for gender-based violence, workplace equality, or land rights – all essential for advancing gender equality. But legal strategies are also increasingly being used to catalyze bolder and faster government action to address the climate crisis. In 2024, more than 2,000 older Swiss women won a landmark case at the European Court of Human Rights, which found that their government's inadequate climate action violated their human rights. Young, indigenous, and rural women also shaped the July 2025 ruling of the Inter-American Court of Human Rights, which required governments to ensure that gender and other intersectional forms of discrimination are taken into account in climate policies.

These cases are part of a growing wave of climate litigation – one that recently reached the International Court of Justice (ICJ), the world's highest court. In July 2025, it delivered what many climate advocates had been waiting for: a clear, unanimous ruling that states are legally obligated under international human rights law and climate treaties to address the climate crisis and its deadly impacts.

This bottom-up effort was spearheaded by law students in Fiji – a nation that contributes less than 1% of global emissions yet faces existential threats from the climate crisis. Another Pacific nation, Vanuatu, championed the case, bringing it to the UN General Assembly, which voted, with the support

▲ Delegates at COP30 in Belém, Brazil demonstrate to raise awareness about the gender dimension of climate justice

of 105 countries, to request an advisory opinion from the ICJ. This was the most participatory case in the ICJ's history, with countries and international organizations submitting nearly 200 written and oral statements combined.

The decision paves the way for people, groups, and states to seek accountability for climate harm. It determined that nations' failure to meet their commitments constitutes a wrongful act that must be stopped, remedied, and prevented from recurring. This could include reparations from the largest greenhouse gas emitters, historically concentrated in the Global North. The question now is how to translate this decision into justice for those who have suffered most – and what it will take to ensure their claims succeed.

As climate risks rise, policy lags

There's a reason why women and girls have been turning to the courts for justice. A growing body of evidence shows that women and girls, particularly those in the Global South, are facing the worst impacts of climate change. The Intergovernmental Panel on Climate Change (IPCC), in chapter 18 of its Sixth Assessment Report, highlights these gendered impacts. By 2050, under a worst-case climate scenario, more than 158 million additional women and girls could be pushed into extreme poverty, nearly half of them in Africa, and 236 million more could face food insecurity, according to UN Women's gender snapshot 2025 report.

These patterns are not random. Globally, discriminatory laws, policies, and social norms restrict women's equal access to rights and resources, including employment, land ownership, credit, technology, and justice. As a result, when climate disasters strike and disrupt livelihoods, infrastructure, and public services, women are less able to adapt, recover, and seek redress for the harm they suffer.

These cascading impacts also put the Sustainable Development Goals – particularly those on gender equality, poverty, hunger, health, and climate action – further out of reach.

What, then, are countries doing to address the twin challenges of gender inequality and the climate crisis, and to meet their obligations under international law? The ICJ advisory opinion affirmed that climate action must be gender-responsive – in other words, it must meet the needs and rights of women and girls. In a major step forward, most countries' latest climate plans – known as nationally determined contributions, or NDCs – recognize the harsh impacts of climate change on women and girls.

This is one of the main findings of the Gender equality and climate policy scorecard, launched by UN Women and the Kaschak Institute. The scorecard tracks gender equality commitments in climate policy and gives advocates the data they need to drive change. But recognizing these unequal impacts is only the first step. The scorecard therefore identifies six essential areas for action:

- women's economic security
- unpaid care work
- health
- gender-based violence
- leadership and participation
- gender mainstreaming

Economic security is the most frequently addressed dimension, with most countries making commitments in areas such as green jobs, climate finance, and climate-resilient agriculture. But other critical areas remain neglected. Climate change intensifies women's unpaid care burdens, from fetching water and cooking to caring for sick family members.

The risk of gender-based violence also rises: after years of progress, child marriage is increasing in places under climate stress. Yet fewer than half of countries commit to action on women's health or unpaid care, and only a handful commit to address gender-based violence as part of their climate plans.

From legal victory to real change

The gap between how climate change affects women and what governments are committing to do is stark. Yet the scorecard reveals innovative policy examples in every region. Closing these gaps depends on three critical factors.

First, supporting women's meaningful participation in planning, monitoring, and decision-making at every level – from local to international. Too often, women on the frontlines of protecting people and ecosystems from environmental destruction are criminalized and attacked. Impunity for this violence must end, so that women-led and grassroots organizations can take their rightful place at the table where climate solutions are designed.

Second, investing in more and better data is essential. Better data can help us see and address inequalities, strengthen the evidence base for legal and political claims, and monitor the implementation of climate commitments. This will help identify what is working, reveal shortcomings, and strengthen accountability for government inaction.

Third, ensuring women's participation and their continued leadership of climate solutions depends on their access to climate finance – and this is where the ICJ's recognition of reparations becomes most consequential. Unlike overseas development aid or voluntary contributions, reparations are grounded in responsibility.

The ICJ's ruling that the largest historic emitters have caused demonstrable harm, and have an obligation to repair it, creates a legal and moral basis for shifting climate finance from charity to responsibility. This means ensuring dedicated and predictable funding that reaches the countries, communities, and women on the frontlines of a crisis they did little to create.

The ICJ has given gender equality and climate advocates a powerful new lever for justice. Whether it delivers will depend on governments, courts, and institutions placing those most affected – rural women, indigenous communities, and young people in the most impacted nations – at the center of what comes next. ■

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02

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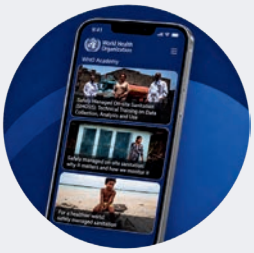
- UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) – tracks systems
- WASH burden of disease

03



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Dimpho Keabonge, EPI focal person with the District Health Management Team, at the national water treatment laboratory in Gaborone, Botswana. Credit: © WHO / Alexia Dickinson

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Why markets alone cannot solve the affordable housing crisis

Across much of the Global South, formal housing markets fail to reach the people most in need of affordable homes. Recognizing incremental, community-driven housing systems is essential for achieving inclusive, climate-resilient cities

◂ Partners from Tuwe Pamoja (Swahili for "let's be together") work on a climate resilience project in Mathare, Kenya. Mathare is an informal settlement in Nairobi, which suffers frequent flooding

By Sheela Patel, Founder and Director, Society for the Promotion of Area Resource Centres (SPARC); Chair, Roof Over Our Heads (ROOH)

Over the past three decades, market-led approaches have come to dominate urban development policy. Governments have shifted from direct provision toward enabling private sector participation, emphasizing efficiency, scalability, and innovation.

In housing, this has translated into mortgage-based finance systems, public–private partnerships, and large-scale housing production. These approaches assume that, with the right incentives, markets can deliver affordable housing at scale.

However, this assumption is increasingly misaligned with reality. In many cities across the Global South, a substantial share of the population lives in informal settlements and remains excluded from formal housing markets.

The global affordable housing crisis is not simply a failure of supply. It reflects a deeper mismatch between formal policy frameworks and the lived realities of low-income urban residents. Addressing it requires looking beyond markets, recognizing informality as a functioning system of provision, and integrating climate resilience into housing and infrastructure policy.

The limits of market-led housing delivery

Market-based housing strategies depend on stable incomes, formal land tenure, and access to finance. These conditions are absent for large segments of urban populations.

Low-income households often rely on informal employment, resulting in irregular and undocumented income streams. Land tenure is insecure or unrecognized, and access to mortgage finance is limited or nonexistent.

For developers and financial institutions, these conditions create high risk. As a result, housing supply at affordable price points is limited, even where subsidies exist. Market-led approaches therefore tend to serve middle-income groups more effectively than the urban poor.

This creates a persistent gap between housing demand and formal supply, contributing to the continued expansion of informal settlements.

Informality as a system of provision

Informality is often framed as a problem to be solved. However, it functions as the primary system through which the majority access housing.

Self-built housing is typically incremental. Households construct and improve dwellings over time, adapting to changing needs and financial capacities. This process allows for flexibility and affordability.

Financing mechanisms are similarly adaptive. Savings groups, informal lending networks, and remittances

provide capital outside formal financial systems. Social organization plays a central role in enabling these processes.

In cities such as Mumbai, community-based organizations have demonstrated the effectiveness of these systems through collective savings, settlement mapping, and negotiated engagement with authorities.

Rather than representing failure, informality reflects a parallel system that compensates for the limitations of formal markets.

Climate change and urban vulnerability

Climate change is intensifying the vulnerabilities associated with informal urbanization.

Informal settlements are often located in high-risk areas, including floodplains and heat-prone zones. As climate impacts increase, these risks become more severe.

Flooding damages housing and disrupts livelihoods, while extreme heat affects health and productivity. Market-based responses, such as climate-resilient housing or insurance, remain largely inaccessible to low-income households.

At the same time, communities are already adapting. They modify structures, improve drainage, and develop localized coping strategies. However, these efforts are under-resourced and lack institutional support.

This highlights a disconnect between where vulnerability is concentrated and where investment is directed.

Fragmentation of climate and development policy

A major barrier to effective action is the separation of climate and development agendas within policy frameworks.

Housing and infrastructure are typically treated as development issues, while climate mitigation and adaptation are addressed separately. This leads to fragmented investments and reduced impact.

For example, housing projects may not account for climate risks, while climate initiatives may not address underlying housing conditions.

Integrating climate considerations into development planning is essential for ensuring long-term resilience and effectiveness.

Implications for the SDGs

These challenges cut across several Sustainable Development Goals:

- SDG 11 (sustainable cities and communities) requires inclusive and affordable housing solutions that reach informal populations
- SDG 13 (climate action) demands targeted adaptation efforts in vulnerable communities
- SDG 1 (no poverty) and SDG 10 (reduced inequalities) are directly affected by exclusion from formal systems

Yet current measurement frameworks tend to prioritize formal delivery – new housing units, infrastructure provision, and financial flows – while overlooking the scale and impact of incremental, self-financed improvements made by low-income households.

Reframing policy

Addressing these issues requires a shift from market-centric approaches to system-based strategies:

First, informal systems must be recognized and supported through flexible regulatory frameworks.

Second, in-situ upgrading should be prioritized over relocation, preserving livelihoods and social networks.

Third, financial systems must adapt to incremental investment patterns through small-scale lending and support for savings groups.

Fourth, climate considerations must be integrated into all housing and infrastructure investments.

Finally, community participation must be institutionalized, recognizing residents as active agents in development.

Conclusion

Market-led development strategies have not delivered for most urban residents, reflecting a structural mismatch between policy assumptions and lived realities.

At the same time, the dominant form of housing production across much of the Global South is not delivered by the state or market, but built by people. Low-income households continuously invest in upgrading, repairing, retrofitting, and expanding their homes. These incremental processes represent a vast, ongoing flow of investment that sustains and improves the largest share of urban housing stock.

However, this reality remains largely invisible within global development frameworks. Metrics used to track progress – particularly within the SDGs – tend to capture formal outputs while overlooking distributed, household-level investments. As a result, the contributions of poor communities are systematically undervalued.

This invisibility has consequences. What is not measured is rarely prioritized. Policies and finance continue to favor formal, large-scale delivery mechanisms, even when they reach fewer people and are less aligned with lived realities.

Recognizing and measuring incremental, community-driven investment is therefore not simply a technical issue – it is a political and strategic imperative. These practices represent not only survival strategies but also the foundation of urban resilience. In a context of increasing climate risk, the adaptability, flexibility, and continuity of incremental housing systems offer critical lessons.

Reframing development to include these systems requires a shift in perspective: from viewing informality as a deficit to recognizing it as a dynamic and productive domain. It also requires rethinking how success is defined and measured.

Achieving inclusive and climate-resilient urban futures will depend on aligning policy, finance, and metrics with the realities of how most people build and sustain their lives. Without this shift, development frameworks risk continuing to overlook the very systems that hold the greatest potential for transformative impact. ■

Delivering on SDG 3

Origin Green can help drive the shift towards healthier, more resilient food systems

By Deirdre Ryan, Director of Sustainability and Quality Assurance, Bord Bia (The Irish Food Board)

For the past two decades, sustainability in the food industry mostly meant production. How do we cut emissions and use resources more efficiently? Protect biodiversity? Through initiatives like Origin Green, Ireland's national food and drink sustainability programme led by Bord Bia, the Irish food and drink industry has made significant progress in measuring and guiding environmental performance. Climate remains one of the defining challenges of our time. But something is shifting.

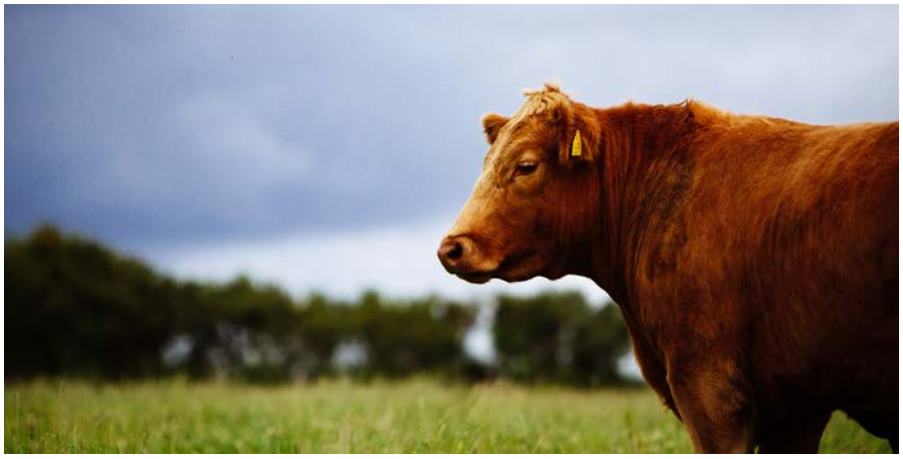
Increasingly, the evidence tells us that people engage with sustainability through a more personal lens: health. That's the conversation happening now.

We call it sustainable nutrition. At Bord Bia, we define it simply: making sure nutritious, wholesome food is available to everyone in a way that works for both people and the planet, while supporting the long-term viability of farmers and the food industry. It's also exactly what SDG 3 is asking for: healthy lives and wellbeing for everyone, at every age. Unhealthy diets are among the leading causes of poor health worldwide. You cannot separate health outcomes from how food is produced, distributed and eaten.

Personal and planetary health

Bord Bia's Global Sustainable Nutrition Barometer surveyed 8,000 consumers across key markets. Environmental concern has not gone away, but nutrition and wellbeing now rank ahead of it. That doesn't mean people care less about the planet. It means there is an opportunity to link the two. The sustainable diets that succeed will deliver for personal health and planetary health at the same time.

People are paying closer attention to nutritional value, natural ingredients and protein. They're also thinking about food security, waste, local sourcing and regenerative agriculture. They want food that's good for them and good for the planet.



Fifty-two per cent of consumers told us they are buying healthier food. In the UK, that number rises to 67%. Nutrition now sits alongside taste as a top driver of food choice and has overtaken cost. Nearly three-quarters of consumers say they would change what they eat to help the environment. Health and sustainability are no longer separate considerations. People want food that is nutritious, affordable, trustworthy and responsibly produced.

But affordability remains one of the biggest barriers to eating well. Nutritious food cannot be something only some people can afford. It also has to be simple, because people are busy and bombarded with conflicting health advice. If food is not accessible and messaging is not trustworthy, none of this works.

Better health depends on nutritious, affordable food, responsibly sourced and reaching the communities that need it.

Origin Green provides the platform for that transition. What began as a programme focused on helping Ireland's farmers and food producers has evolved to support a broader vision of sustainable food systems, where climate action, biodiversity, food security and nutrition are interconnected.

In Ireland, we have an opportunity to lead that conversation. By combining the sustainability credentials demonstrated through Origin Green with a growing understanding of sustainable nutrition, we can build food systems that support healthier lives, stronger rural communities and a healthier planet for future generations. ■

For more information, visit:
www.origingreen.ie

SDG Action thanks Bord Bia for its generous support for this publication

Delivering urban water under uncertainty

Safe, affordable water in urban areas is central to sustainable development, yet progress remains uneven. To close this gap, cities need to adopt integrated, evidence-based approaches that build resilient and equitable services in practice

By Phoebe Koundouri, Professor, Athens University of Economics and Business and University of Cambridge; Co-Chair, UN Global Sustainable Development Report 2027; Founder and Director, AE4RIA Research Centers; Angelos Alamanos, Independent Researcher; Anna Triantafyllidou, Researcher, ReSEES.AE4RIA, Athens University of Economics and Business; SDU. AE4RIA, ATHENA Research Center; UN SDSN Global Climate Hub; and Ioannis Arampatzidis, Researcher, ReSEES.AE4RIA, Athens University of Economics and Business; SDU.AE4RIA, ATHENA Research Center; UN SDSN Global Climate Hub

Urban water systems are no longer "just" utilities. They are socio-technical infrastructures operating under high uncertainty: climate volatility, changing consumption patterns, ageing networks, pollution risks, and competing uses across water, energy, and food systems (often referred to as the water–energy–food nexus). A city can meet a technical supply target and still fail the public if affordability collapses, service reliability becomes unequal, or trust erodes. That is the pathway to political backlash and underinvestment – precisely the conditions that lock cities into fragility.

Urban water stress is a systems problem

Across Europe's Southeast Mediterranean – and increasingly beyond – water stress is being driven by the layering of:

◂ A section of the Mornos aqueduct near Delphi, Greece. The aqueduct is the primary water source for Athens, transporting water 110 kilometres (68 miles) from the reservoir in Mornos

- climatic aridification and higher evaporation
- rapid urban expansion and seasonal tourism peaks
- pollution and water-quality degradation
- chronic underinvestment that has left treatment, metering, and distribution networks outdated

These pressures are compounded by entrenched inequities: low-income and peri-urban groups are often more exposed to service unreliability and contamination risks and have fewer options to adapt.

Policy frameworks already exist. For example, Europe has long embraced holistic principles through instruments such as the EU Water Framework Directive and the Urban Waste Water Treatment Directive. But implementation remains uneven, held back by local obstacles, underfunding, and weak integration between pricing, investment planning, and social protection.

This matters because water reliability is a foundation for socio-economic stability in cities. When water policy is reduced to isolated technical upgrades or tariff reforms, it misses the reality that renewables, land-use change, wastewater reuse, network losses, and household vulnerability are part of the same system. In practice, siloed decisions can produce "optimal" plans that fail under prolonged or repeated droughts, peak demand, affordability constraints, or public rejection.

The operating system cities need to deliver reliable water

Most cities already agree on the vision: resilient, efficient, safe, and affordable drinking-water services, compatible with environmental limits. The gap is not ambition, but delivery capability under uncertainty.

What is missing is an integrated operating system that can:

- quantify trade-offs and synergies across hydrology, infrastructure, demand, energy, finance, and equity
- stress-test decisions under a range of climate and socio-economic futures rather than single forecasts
- embed legitimacy through co-design, so reforms are not only "efficient" but feasible in practice
- iterate continuously, updating models and policies as new evidence arrives (from sensors, pilots, and behavioral responses)

The Water-Futures project, funded by the European Research Council, is one attempt to build such an operating system in practice. The project integrates cross-sectoral modeling, digital-twin forecasting (using virtual replicas of physical systems), and real-time monitoring with socio-economic and behavioral approaches, deploying these through Living Labs that act as regulated sandboxes for testing reforms and technologies.

The evidence loop: a practical route forward

Building on this operating-system approach, the Sustainable Development Solutions Network's Global Climate Hub proposes an integrated framework for sustainable urban water services, centered on a structured "evidence loop."

1. Cross-sectoral modeling of physical and natural systems
Combine hydrology and water-resource availability with drinking-water system modeling (supply, treatment, storage, distribution, and losses). This includes scenario analysis that explicitly considers uncertainty and – where feasible – digital twins that ingest real-time data.

2. Socio-economic modeling of vulnerability, affordability, and pricing
Treat tariffs and investments as tools that shape who pays and who benefits, not just revenue tools. Integrate vulnerability mapping, affordability constraints, and welfare impacts to make "full cost recovery" compatible with social foundations.

3. Experimental and behavioral economics to reveal acceptance and response
Use stated preference or choice experiments (survey-based methods to understand how people value different options) to estimate willingness-to-pay, preferences for investment bundles (for example, leak detection, nature-based solutions, or reuse), and behavioral responses to tariff structures and messaging (including loss-aversion framing).

4. Living Labs for co-creation, validation, and iteration
Implement pilots and policy tests in real settings, using workshops, randomized trials where appropriate, and regulated sandboxes. Feed observed behavioral uptake, performance metrics, and

distributional outcomes back into the models, continuously recalibrating both the technical and the socio-economic assumptions.

Closing the loop

The core principle is simple:

- models generate hypotheses
- valuation and distributional analysis assign social meaning
- Living Labs test feasibility and legitimacy
- results feed back to update both models and policy design

Athens in practice: a blueprint for urban water delivery

In Athens (a large European urban water system serving roughly 4.4 million people), Water-Futures applies this integrated philosophy to design "learning" drinking-water networks – systems that can adapt to unanticipated conditions through explainable machine learning, continuous monitoring, and scenario-based decision support.

The project explicitly reframes the urban water network as an asset for societal well-being (not only an engineering artifact). It operationalizes the socio-technical transformation via the "experimental economics and Living Lab loop."

Within this approach, Living Labs combine:

- physical pilots (such as smart metering, Internet of Things leak detection, decentralized treatment, and nature-based interventions), connected to a secure data backbone
- digital-twin scenario exploration, integrating meteorological, demand, hydraulic, and socio-economic data to stress-test decisions and create shared "objects of negotiation" for stakeholders

Critically, this structure makes contested policy variables testable:

- urban growth and peak demand can be represented and trialed
- climate shocks are modeled across a range of scenarios (droughts, extremes, or groundwater impacts)
- economic constraints are explored through tariffs, subsidies, or financing instruments
- social justice is quantified through sampling and distributional metrics that reveal who bears costs and who benefits

A city's water transition fails when it produces either technically elegant plans without public acceptance, or politically acceptable plans that violate hydrological and infrastructure limits.

The "modelling, valuation, and Living Lab loop" is designed to avoid both failure modes by producing:

- distributional metrics and socio-economic narratives that support equitable tariff design (including lifeline tiers and targeted subsidies), grounded in affordability constraints and measured preferences rather than assumption
- robust investment packages that are "scalable because validated": leak reduction, monitoring, AI forecasting, decentralized treatment and reuse options, and nature-based solutions – selected not only for technical performance but also for legitimacy and ease of implementation
- transparent decision support: open data protocols, clear impact metrics, and mandatory validation through modeling, economic analysis, and Living Lab testing before major infrastructure or tariff reforms – so decisions are defensible and trusted

From pilots to scale

There are three clear priorities for sustainable cities and urban water infrastructure:

1. Reframe water security as reliable service and social legitimacy

Reliability is not only continuity of supply – it is also water quality, affordability, and perceived fairness. Cities should institutionalize distributional assessment as part of routine utility decision-making, so that equity becomes a design constraint rather than an afterthought.

2. Move from isolated projects to integrated, uncertainty-ready pathways

Cities need integrated pathways that link hydrology, networks, demand management, pollution control, and investment sequencing – stress-tested under a range of futures. The objective is robustness: decisions that perform well across plausible climates and socio-economic trajectories, not only under a "most likely" forecast.

3. Institutionalize Living Labs as regulated sandboxes for tariffs, nudges, and technology

Public acceptance is not a communications problem; it is a design problem. Living Labs allow tariff reforms, behavioral interventions, and technology pilots to be tested transparently, iterated quickly, and scaled only after validation – linking innovation pipelines to utilities through matched funding and open evaluation criteria.

From framework to delivery at scale

Cities can secure reliable, high-quality drinking-water services – even under deep uncertainty. But this will not be achieved through narrow technical upgrades or tariff debates in isolation. The Athens Water-Futures example, aligned with the Global Climate Hub's approach, illustrates a replicable blueprint: combine cross-sectoral physical modeling and digital-twin tools with socio-economic analysis of vulnerability and pricing, then validate reforms through Living Labs that function as sandboxes for generating evidence and building legitimacy.

The vision of sustainable cities is clear. What is needed now is the operational infrastructure to deliver it: integrated models, transparent distributional metrics, iterative experimentation, and co-designed pathways that respect both hydrological limits and the social contract. ■

Investing to avert a sanitation crisis

Demographics and climate change are combining to create an impending sanitation crisis in many poorer regions of the world. Averting it means investing now in safe, climate-resilient sanitation as a foundation for health, dignity, and prosperity

By Kate Medlicott, Team Lead, Sanitation and Wastewater, World Health Organization (WHO)

With less than four years to go on the Sustainable Development Goals, the latest SDGs Report shows that SDG 6 on clean water and sanitation is significantly off track. Sanitation and wastewater treatment – measured by SDG Indicators 6.2.1 and 6.3.1 – are seriously lagging. At current rates of progress, it will be almost another 40 years before everyone has access to safe, dignified sanitation services that protect human health and the environment. And that's assuming the accelerating trends of climate change, conflict, and economic shocks do not slow or undo historical levels of progress.

▲ A newly installed water point at a school in Zambezia province, Mozambique. The school had been left without WASH facilities after Cyclone Freddy. The lack of water for hygiene and sanitation particularly impacted the education of girls, who had to miss schooling during menstruation

Since 2015, 1.2 billion people have gained access to safely managed sanitation services, with global

Although universal access is often seen as prohibitively expensive, sanitation delivers a high return on investment: prevention is always better than cure

coverage increasing from 48% to 58%. The number of people practicing open defecation fell by 429 million, and the practice has now been almost eliminated in urban areas – an impressive and hard-fought milestone dating back to the momentum generated by the International Year of Sanitation in 2008 and the explicit recognition of sanitation as a human right in 2010.

However, 3.4 billion people still lacked safely managed sanitation services in 2024. In addition, almost half of domestic wastewater globally continues to be discharged untreated or inadequately treated. Rates of progress would need to increase six-fold to reach SDG Target 6.2, as measured by Indicator 6.2.1 – an increasingly distant prospect in the face of declining international cooperation in general, and for water, sanitation, and hygiene (WASH) specifically, alongside national budgets stretched by cost-of-living crises, conflict, and climate change.

Proof that rapid progress is possible

Yet history shows it can be done: WHO and UNICEF have documented evidence on what works from successful sanitation programs. Many countries have made rapid progress, improving lives, human health, the environment, and economies – all within a generation. In each case, the common success factor has been strong political leadership to set policy, plan, mobilize investment, regulate services, galvanize widespread participation, and continuously learn and adapt toward achieving safe sanitation for all.

For example, in the 1960s and 1970s, Singapore, Thailand, South Korea, and Malaysia produced rapid and remarkable results to deliver total sanitation coverage. When they began national sanitation planning, per capita income levels in the East Asian countries studied were comparable to those of many sub-Saharan African countries today.

Since 2015, several countries have shown that rapid progress is possible. India and Nepal, for example, have created mass movements to eliminate the undignified and dangerous practice of open defecation. Cambodia and Ethiopia have cut open defecation by more than 80% and 50%, respectively. Over the same period, 30 countries have increased coverage of at least basic sanitation by at least 10 percentage points, including six – Nepal, Cambodia, India, Sudan, Timor-Leste, and Lao PDR – that achieved gains of at least 20 percentage points. For safely managed sanitation, 24 countries increased coverage by at least 10 percentage points, with Georgia, Albania, the occupied Palestinian territory, Egypt, and India recording gains of 20 percentage points or more.

The cost of inaction – and the return on investment

Access to sanitation is a human right, and safely managed sanitation is also a public good providing benefits across society in improved health as well as economic and social development. Safely managed sanitation should be recognized as an essential public service, foundational to a healthy population and a prosperous society. As such, failure to make progress on sanitation has knock-on effects across many other SDG areas, particularly SDG 3 on health. Impacts include:

- illness and diseases such as typhoid and cholera, which can kill within days if not treated
- diarrhea, which can lead to poor nutrition and stunting in children
- neglected tropical diseases
- reduced dignity, safety, and gender equality for women, people with disabilities, and sanitation workers in particular
- increased costs, including healthcare, lost income, forgone educational opportunities, and costs resulting from environmental pollution

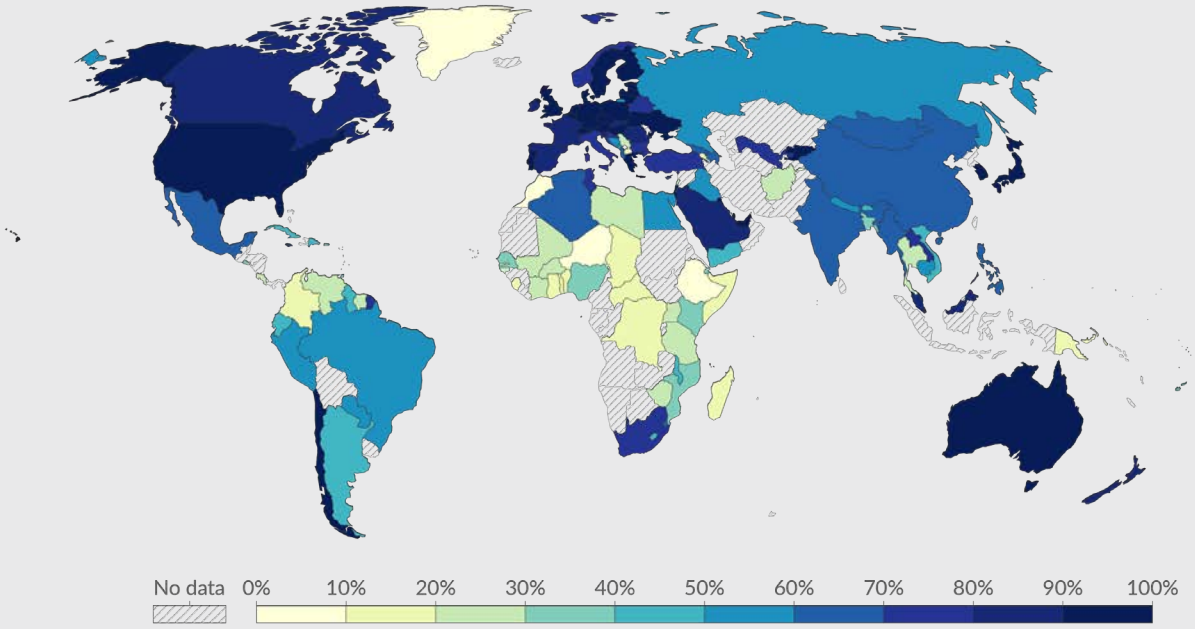
These consequences accrue predominantly to the poorest and most marginalized. But failure on sanitation also has global consequences: lack of sanitation is a major global driver of antimicrobial resistance, which threatens to make even simple infections deadly for all.

As a result, the world is missing out on the many benefits of safe sanitation. Although universal access is often seen as prohibitively expensive, sanitation delivers a high return on investment: prevention is always better than cure. Historical analysis from 2018 shows that investment in sanitation generates at least 5 dollars in health, social, and economic benefits for every dollar invested.

So what would it cost? UN-Water's Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS) 2025 report puts the scale of need in perspective: across 70 responding countries, the annual cost of implementing national WASH plans and strategies is estimated at more than USD 69 billion, with sanitation accounting for around USD 20 billion across the 58 countries that provided sanitation estimates. That may sound like a lot, but consider that the global handbag market was estimated at USD 86 billion in 2025. Funding is still falling far short: only 15% of countries reporting on urban sanitation, and 9% of those reporting on rural sanitation, said they had sufficient funding from all sources to meet these basic, life-saving targets. A separate World Bank analysis of the SDG water and sanitation financing gap estimates that countries would need to roughly triple

FIGURE 1:
Share of population using safely managed sanitation 2024

Safely managed sanitation are improved sanitation facilities[1] that are not shared with other households and where excreta are safely disposed in situ or transported and treated off-site



Data source: WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (2025)
Note: Where data for 2024 is unavailable, the value from the closest year between 2014 and 2023 is shown instead.
OurWorldinData.org/sanitation | CC BY

1. **Improved sanitation facilities** are those designed to hygenically separate excreta from human contact, and include: flush/pour flush toilets connected to piped sewer systems, septic tanks or pit latrines; pit latrines with slabs (including ventilated pit latrines), and composting toilets.

annual spending on water supply and sanitation relative to current levels – and by much more in low-income regions and fragile contexts.

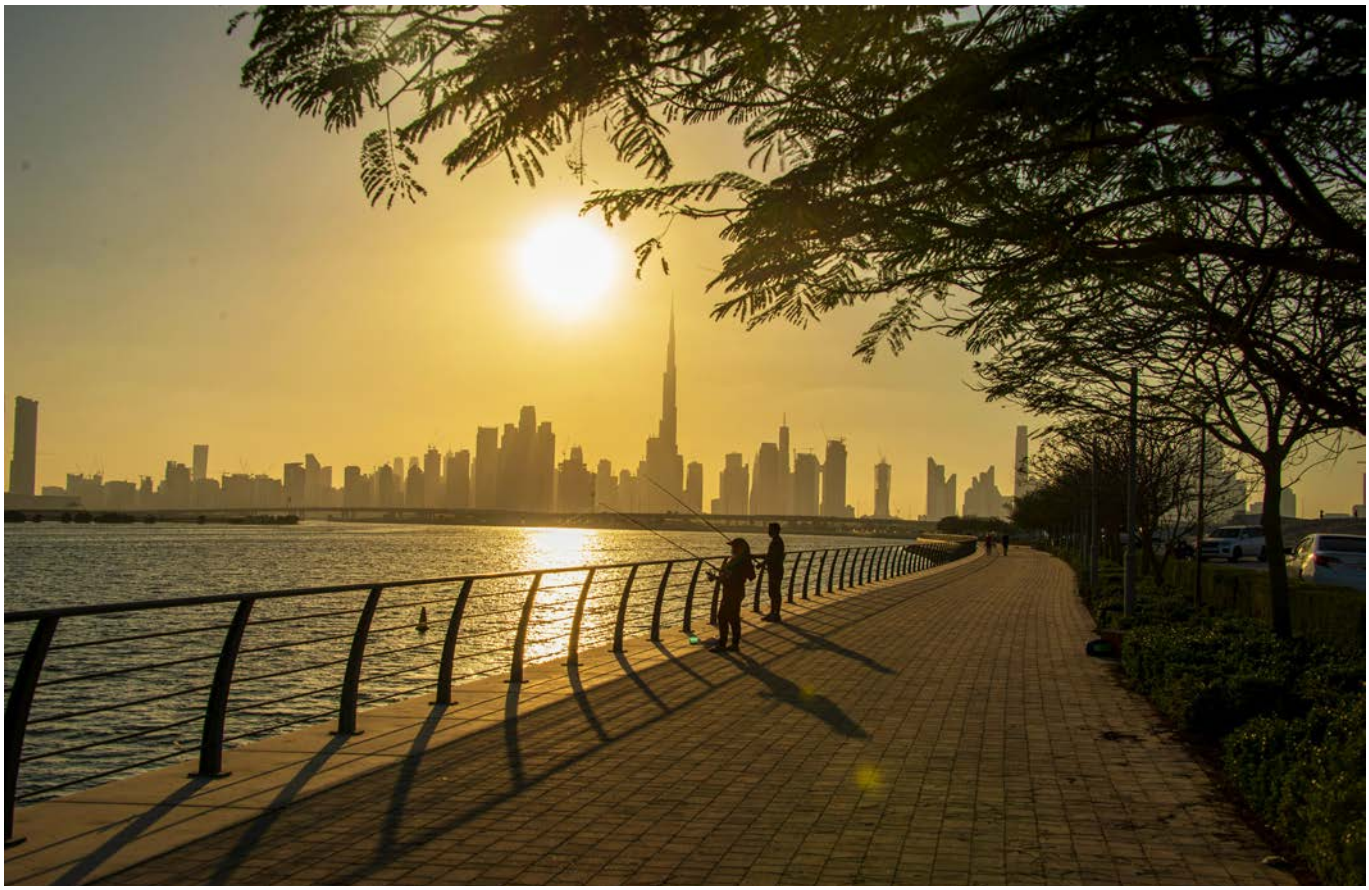
Climate finance can help close the gap

While governments are responsible for WASH services – and, together with their citizens, bear most of the cost – global climate finance presents a new and growing opportunity to accelerate progress as traditional sources of official development assistance dwindle. Increasing evidence, assembled by the Climate Resilient Sanitation Coalition, is demonstrating both the need to adapt sanitation systems to more frequent floods, droughts, and extreme weather, and how to do so.

Recent evidence also shows methane emissions from sanitation are far greater than previously assumed: emissions from sewered systems are estimated to account for 7% and other sanitation systems for another 5% of global methane emissions. As a result, more countries are including sanitation in national adaptation plans and nationally determined contributions. The Green Climate Fund has released guidance for developing sanitation projects, while the new Global Goal on Adaptation includes a dedicated target on climate resilient water and sanitation. In addition, energy, water, and nutrient recovery from safe use of wastewater and sludge has untapped potential to reduce emissions and increase resilience in other sectors, particularly agriculture.

The sanitation crisis is not inevitable. However, averting it will require urgent political commitment and sustained investment. The world already has the knowledge, technologies, and evidence needed to accelerate progress, and many countries have demonstrated that transformative change is possible within a generation.

As the deadline for the SDGs approaches, sanitation must be recognized not as a cost but as a strategic investment in public health, economic prosperity, climate resilience, and human dignity. The choice facing governments, development partners, and financial institutions is clear: continue underinvesting and bear the escalating costs of inaction, or seize the opportunity to deliver safe, climate-resilient sanitation for all. ■



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Redefining sustainable water management for a water-scarce world

Through innovation, foresight, and rigorous alignment with global standards, Dubai Electricity and Water Authority (DEWA) PJSC is pioneering a future-ready water management model that safeguards reliability, sustainability, and resilience, contributing meaningfully to the achievement of SDG 6

Water scarcity has emerged as one of the defining challenges of our time, shaping economic resilience, social stability, and the health of ecosystems worldwide. As climate change accelerates and population growth intensifies pressure on natural resources, water systems around the world are being tested, often beyond the limits for which they were originally designed.

The challenge is especially acute in arid and semi-arid regions, where limited natural freshwater availability must support fast-growing cities, industrial activity, and rising living standards. In these contexts, achieving water security is inseparable from economic competitiveness, social wellbeing, and long-term sustainability. Addressing this challenge requires a fundamental rethinking of how water is produced, managed, and protected.

◂ Dubai is located in an arid environment, and has a growing economy and population. It has therefore placed water security at the heart of its sustainability agenda

Traditional, linear models of supply and consumption are no longer sufficient. Instead, water systems must evolve into integrated, intelligent networks capable of optimizing resources in real time, anticipating risks, reducing losses, and safeguarding ecosystems while ensuring uninterrupted service.

UN Sustainable Development Goal (SDG) 6 reflects this shift by positioning water not merely as a basic service, but as a strategic enabler of sustainable development. Its focus on efficiency, governance, ecosystem protection, and universal access underscores the need for innovation, data-driven decision-making, and long-term planning aligned with global standards. Against this backdrop, cities operating under conditions of scarcity have become living laboratories for innovation, pioneering advanced AI technologies and resilience-building solutions that offer valuable lessons for a water-stressed world.

Dubai is one such example. Located in an arid environment and experiencing sustained economic and population growth, the emirate has placed water security at the heart of its sustainability agenda. Dubai recognizes that long-term prosperity depends on the responsible management of every drop.

Guided by forward-thinking leadership, DEWA has led the emirate's transformation in sustainable water management. It has positioned water security as a strategic imperative that underpins resilience, sustainability, and economic growth.

Since the announcement of the Global Goals in 2015, DEWA has embedded the SDGs into its strategic framework, recognizing them not as abstract aspirations but as practical drivers of operational excellence and long-term resilience. SDG 6 is among DEWA's highest-priority goals, reflecting the centrality of water to Dubai's social and economic development.

Dubai's strategic frameworks, including the UAE Water Security Strategy 2036, the Dubai Economic Agenda (D33), the Dubai 2040 Urban Master Plan, and the Dubai Demand Side Management Strategy 2050, further guide DEWA's actions. Together, these strategies underscore the importance of resource efficiency, resilience, and innovation in securing water for future generations.

Digital transformation at the core

At the heart of DEWA's approach is a holistic view of water management. Rather than treating production, transmission, and consumption as isolated functions, DEWA manages them as interconnected elements of a single system supported by advanced digital infrastructure. DEWA meets 100% of Dubai's potable water demand with high reliability, supported by continuous investment designed to enhance efficiency and reduce environmental impact. These efforts are complemented by stringent water quality controls, ensuring that potable water supplied across Dubai complies fully with the latest World Health Organization (WHO) drinking water guidelines.

One of the most striking indicators of DEWA's success is its performance in reducing water losses. In 2025, DEWA achieved water network losses of just 4.4%, the lowest level globally. This achievement reflects a sustained commitment to precision monitoring, predictive maintenance, and data-driven asset management.

Digital transformation is central to DEWA's approach to sustainable water management. DEWA operates a smart grid supported by its advanced Supervisory Control and Data Acquisition (SCADA) Centre. This enables round-the-clock remote monitoring and control of water transmission and distribution networks spanning thousands of kilometers. This digital backbone integrates real-time hydraulic modeling, advanced analytics, and automated reporting. It allows engineers to quickly identify anomalies, manage pressure, and respond to incidents such as leaks or pipeline failures. Thousands of smart devices across the network provide continuous data streams, enhancing situational awareness and operational resilience.

Complementing SCADA is Hydronet, an artificial intelligence (AI) and deep learning platform that analyzes network behavior in real time to support predictive maintenance, optimize asset performance, and strengthen supply reliability. In parallel, DEWA Space-D program is a satellite-enabled platform

▾ DEWA's Supervisory Control and Data Acquisition (SCADA) Centre provides round-the-clock remote monitoring and control of thousands of kilometres of water distribution networks

> *Sustainable water management depends not only on resilient infrastructure but also on informed and engaged customers*

that monitors DEWA's assets, including water infrastructure, identifies risks, and enables proactive maintenance in a rapidly evolving urban environment. DEWA also deploys advanced leak-detection technologies.

These include smart ball inspections (where free-swimming sensors travel through pipelines to identify leaks), acoustic sensors, hydrophones, correlators, and helium gas detection, supported by pressure management and district-metered areas. These capabilities are unified through DEWA's Smart Water Distribution Management System, enabling data-driven decision-making and continuous performance improvement across the network.

Engaging customers as partners

Sustainable water management depends not only on resilient infrastructure but also on informed and engaged customers. DEWA therefore places strong emphasis on digital services and behavioral programs that empower customers to actively support conservation.

DEWA's High Water Usage Alert service instantly notifies customers of abnormal consumption, enabling early detection of internal leaks and system defects while delivering significant water, energy, and cost savings.

Complementing this, the My Sustainable Living Programme uses AI and behavioral science to help residential customers optimize their electricity and water use. Through personalized insights and peer comparisons, the program encourages sustainable habits and supports Dubai's Demand Side Management Strategy, which targets a 50% reduction in electricity and water demand by 2050. In 2025, customers enrolled in the program achieved total water savings of 606.2 million imperial gallons and total electricity savings of 120.6 GWh.

Building resilience through strategic storage

Beyond day-to-day efficiency, DEWA places strong emphasis on long-term water security and emergency preparedness. The Aquifer Storage and Recovery (ASR) project is a cornerstone of this effort. By storing surplus desalinated water in deep underground aquifers and retrieving it when required, ASR provides a resilient and cost-effective alternative to traditional storage methods. Once fully operational, the project will offer strategic reserves that meet Dubai's emergency water needs, significantly enhancing resilience while delivering substantial economic and environmental benefits.

A global contribution

DEWA's commitment to clean water extends beyond Dubai's borders. DEWA supports the UAE Water Aid Foundation (Suqia), a non-profit organization that focuses on improving access to safe and sustainable water solutions in water-scarce communities worldwide, reinforcing the global reach of SDG 6. Suqia has positively impacted the lives of around 15 million people across 37 countries.

As water challenges grow more complex, DEWA's experience demonstrates the power of integration – linking technology, governance, customer engagement, and environmental responsibility into a cohesive model. By aligning the Global Goals with local action, DEWA is not only securing water for Dubai but also contributing valuable insights to the global dialogue on sustainable water management.

In doing so, DEWA affirms that water, when managed with purpose and foresight, can be a foundation for resilience, prosperity, and sustainable development for generations to come. ■

About Dubai Electricity and Water Authority (DEWA) PJSC

DEWA was established in 1992 as a result of the merger of the Dubai Electricity Company and the Dubai Water Department. DEWA is the exclusive electricity and water utility provider in Dubai. DEWA listed on the Dubai Financial Market in April, 2022.

DEWA's attractive business profile as viewed by investors has led to the historic success of this public listing that attracted US$ 85 billion demand and 37 times oversubscription. The Group generates, transmits and distributes electricity and potable water to end users throughout Dubai. DEWA owns 80% of Empower, currently the world's largest district cooling services provider by connected capacity, and owns, manages, operates and maintains district cooling plants and affiliated distribution networks across Dubai.

The Group also comprises a number of other successful businesses including Mai Dubai, a manufacturer and distributor of bottled water, Digital DEWA, a digital business solutions company, and Etihad ESCO, a company focused on the development and implementation of energy efficient solutions.

To learn more, visit: www.dewa.gov.ae

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Dubai Electricity & Water Authority

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Valuing urban resilience

Cities face difficult choices about how to invest in resilience as climate pressures intensify. Valuing health, ecosystems, social inclusion, and reliable services alongside financial costs can help them choose fairer, more effective ways to adapt to climate change

By Phoebe Koundouri, Professor, Athens University of Economics and Business and University of Cambridge; Co-Chair, UN Global Sustainable Development Report 2027; Founder and Director, AE4RIA Research Centers; and Conrad Landis, Assistant Professor, Department of Economics, University of Ioannina; Researcher, ReSEES. AE4RIA, Athens University of Economics and Business; SDU.AE4RIA, ATHENA Research Center; UN SDSN Global Climate Hub

Cities are where climate risks and development choices collide. Heatwaves raise electricity demand and threaten health. Drought strains water and food systems. Floods damage transport, housing, and utilities. And poorly planned infrastructure can lock in emissions and vulnerability. Green roofs, water reuse, rainwater harvesting, cooling systems, and desalination therefore cannot be judged only by construction costs. They also affect public health, ecosystems, social inclusion, energy use, and the reliability of essential services. Urban adaptation consequently sits at the intersection of Sustainable Development Goals (SDGs) 3 (health and well-being), 6 (water and sanitation), 7 (affordable and clean energy), 9 (infrastructure), 11 (sustainable cities), and 13 (climate action), with further consequences for inequality, biodiversity, and decent work.

Traditional financial appraisal captures capital expenditure (CAPEX) and operating expenditure (OPEX) but often overlooks benefits that have no market price. A wetland may reduce flood peaks, filter pollutants, and support biodiversity. Urban trees may cool streets, improve air quality, and create recreational value. A local wastewater reuse scheme may strengthen water security and reduce pressure on centralized networks. Social cost-benefit analysis broadens the decision frame by asking whether the total benefits to society exceed the total costs, regardless of who pays or whether the benefit is traded in a market.

Valuing what markets overlook

The analysis combines market and non-market values to calculate an intervention's total social net present value. The market component calculates the present-day value of capital and operating costs, revenues, and avoided expenditures over the life of the intervention. The non-market component covers services such as water regulation, habitat support, health, and quality of life. An intervention's description is compared with four broad categories of ecosystem service

▲ The Lakeside Village accomodation at the University of Miami, US, featuring green rooves, rain gardens to manage stormwater, heat recovery systems, and stilt structures to protect against extreme weather events

– provisioning, regulating, supporting, and cultural – to identify which services it is most likely to provide. Benefit-transfer calculations draw on a screened database of 5,486 environmental valuation studies and are adjusted to regional conditions before aggregation and discounting.

The method uses data from primary valuation studies to construct a prediction equation. This relates reported household willingness to pay to the type of ecosystem service, the regional climate and ecology, the valuation method, and socio-economic characteristics. Characteristics of the target area are then entered into the model to estimate a per-household value. The resulting estimate is weighted by the intervention's service profile, multiplied by the number of affected households, and converted into a present-day value over the life of the intervention. The approach follows Johnston et al in Benefit Transfer of Environmental and Resource Values (2015), together with subsequent applications by Koundouri et al in Valuation of marine ecosystems and Sustainable Development Goals (2023) and Ecosystem services valuation for supporting sustainable life below water (2023).

Benefit transfer makes hidden value visible but does not remove judgment. Estimates can be misleading when local incomes, ecosystems, cultural preferences, or project design differ from the original studies. Willingness to pay also reflects ability to pay, so lower-income communities should not appear less important because their monetary responses are smaller.

The choice of discount rate matters too when converting future costs and benefits into present-day values: a high fixed rate favors near-term savings, while a social discount rate that declines over time gives greater weight to benefits for future generations. Social cost-benefit analysis should therefore remain a screening and comparison tool, supported by local ecological evidence, distributional analysis, and stakeholder deliberation, rather than an automatic decision rule.

TABLE 1: What a social cost-benefit appraisal counts

DIMENSION	WHAT ENTERS THE APPRAISAL	WHY IT MATTERS FOR URBAN RESILIENCE
Market investment	CAPEX, annual OPEX, revenues, and avoided expenditures, discounted over time.	Tests affordability, budget pressure, and long-term operating needs.
Non-market value	Household willingness to pay for ecosystem services, scaled to affected households, and socially discounted.	Makes health, water regulation, biodiversity, and amenity benefits visible.
Regional context	Regional climate and ecology, household numbers, and socio-economic characteristics.	Shows where benefits occur and which communities are affected.
Implementation risk	Governance, finance, inequality, acceptance, skills, infrastructure, technology, coordination, engagement, and climate uncertainty.	Distinguishes theoretical value from what can be delivered in practice.

Testing the approach in practice

The methodology and case evidence were developed through the IMPETUS project, an EU Horizon 2020 initiative that brought together 32 partners from nine countries and tested adaptation approaches across seven European regions with different climates and ecosystems. Within the project, the Athens University of Economics and Business team combined social cost-benefit analysis with a risk-factor assessment covering governance, finance, inequality, social acceptance, technical expertise, infrastructure, technology access, inter-sectoral coordination, stakeholder engagement, and climate uncertainty. The result is a portfolio view: an intervention can produce high social value yet still fail if institutions, finance, or public trust are weak.

The IMPETUS case study in Attica, Greece, shows the value of assessing adaptation measures in this broader way. The region faces heat, drought, groundwater pressure, competing urban, agricultural, and tourism demands, and rising energy use. Stakeholders assessed a range of measures to address water scarcity and strengthen climate resilience, including information campaigns and policy measures, two phases of treated-wastewater reuse, rainwater harvesting at two scales, controlled-environment agriculture, desalination, and sewer mining (the extraction of wastewater from the sewer network for local treatment and reuse). The screening results below compare investment inputs with relative ratings for intangible benefits and cost-effectiveness.

Rainwater harvesting for 5,000 homes was the most cost-effective option, despite a lower intangible benefit rating. Controlled-environment agriculture also performed strongly on cost-effectiveness while offering benefits through water efficiency and more stable food production. Sewer mining occupied a useful middle position: it combined substantial non-market benefits with moderate cost-effectiveness, while also diversifying the local water supply.

Information and policy measures delivered broad societal benefits with no initial capital cost, although their annual program cost and dependence on sustained behavioral change limited their relative efficiency. Treated-wastewater reuse generated strong environmental benefits, but the first phase was less cost-effective because of infrastructure costs. The second phase improved as scale and system use increased.

Desalination ranked last on both dimensions. It can provide a dependable water source when rainfall is unreliable, but the assessed option required €72 million in CAPEX and annual OPEX of €21.9 million, alongside high energy demand and environmental concerns. Renewable electricity can lower its carbon footprint, but it does not remove the high capital cost, the need to dispose of brine, or other

TABLE 2: Illustrative results for the Attica water-scarcity portfolio

INTERVENTION	CAPEX(€m)	Annual OPEX (€m)	INTANGIBLE BENEFIT RATING	COST-EFFECTIVENESS RATING
Information campaigns and policy	0	5.00	4	3
Treated-wastewater reuse: phase 1	57	3.50	4	2
Treated-wastewater reuse: phase 2	32	1.90	4	4
Rainwater harvesting: 5,000 homes	8.7	0	2	8
Controlled-environment agriculture	22	0	4	7
Rainwater harvesting: 15,000 homes	26	0	2	6
Desalination	72	21.90	1	1
Sewer mining	5	0.14	4	5

Note: CAPEX and OPEX are in millions of euros. Ratings are relative to this eight-intervention portfolio. Higher values indicate stronger performance in that dimension.

operational trade-offs. This highlights why water, energy, and infrastructure decisions must be considered together: decarbonizing energy can improve an adaptation option without automatically making it the best overall investment.

Results from the IMPETUS case study in the Dutch province of Zeeland show the same need for a portfolio approach. Cooling technologies and energy-efficient appliances received the highest intangible benefit ratings, while early-warning systems were the most cost-effective. Green roofs, vegetated areas, shading, and replacing hard surfaces with green space delivered moderate ecosystem-service ratings and generally low operating costs, but their relative efficiency varied with scale and design. Public-health measures were inexpensive and fast to deploy, even where the broad ecosystem-service classification assigned them lower scores for intangible benefits. That apparent tension is useful: it shows why screening results must be interpreted alongside local health data and the needs of vulnerable residents.

Building a balanced resilience portfolio

Cities should therefore avoid choosing between green and gray infrastructure as if they were mutually exclusive. Nature-based solutions can cool neighborhoods, retain stormwater, and improve biodiversity, but they require land, maintenance, and long-term governance. Engineered assets can provide more predictable service levels, but they often involve higher financial costs and energy demand and can lock cities into inflexible systems. Behavioral measures and early-warning systems can be highly cost-effective, yet they depend on trust and institutional capacity.

The strongest strategy is usually a sequenced portfolio:

- low-cost preparedness and demand management first
- targeted nature-based and efficiency measures next
- capital-intensive supply or protective infrastructure only for risks that remain after other measures are in place

Combining measures in this way can also turn connections between the SDGs into practical action. Water reuse links SDG 6 to resilient infrastructure under SDG 9 and sustainable cities under SDG 11. Efficient cooling and building measures connect SDGs 7 and 13 while protecting health under SDG 3. Green infrastructure can support biodiversity and reduce unequal exposure to heat and flooding – but only if its benefits reach disadvantaged neighborhoods. Finance should follow this integrated logic: budgets and investment plans should recognize avoided losses, ecosystem services, and social co-benefits, not only direct cash flows.

This work forms part of a wider program of research by AE4RIA and the ReSEES Laboratory at Athens University of Economics and Business. ReSEES's work includes environmental valuation, econometrics, integrated environmental-economic modeling, risk analysis, geographical information systems, and the development of decision-support tools. Related AE4RIA projects cover:

- climate neutrality and resilience
- sustainable oceans and seas
- the interconnections between water, food, energy, and biodiversity
- innovation acceleration
- socio-economic and financial pathways
- education and skills

Together, these projects support the development and application of transferable appraisal methods.

What cities count as value

Urban resilience will depend not only on how much cities invest, but on what they count as value. Social cost-benefit analysis cannot settle every ethical or political question, and the uncertainty in its estimates must be made clear. Yet it can reveal benefits that conventional accounts ignore, show where energy, water, and infrastructure choices reinforce or undermine one another, and help decision-makers set priorities more credibly.

Used with local evidence, stakeholder co-design, and implementation-risk analysis, it offers cities a practical way to select a mix of measures that is financially responsible, socially just, and ecologically durable. ■

Building the infrastructure for peace

Peace deals may be negotiated by leaders, warring parties, and external powers. But to achieve lasting peace, formal agreements must be connected to peacebuilding from the grassroots up

By Bineta Diop, Founder and Chair of the Board, Femmes Africa Solidarité; Co-Convener, African Women Leaders Network

In my work on peace and security across Africa, I have witnessed a recurring contradiction. Peace agreements are often signed, yet peace remains elusive for the communities they are meant to serve. Many agreements have been concluded without significantly reducing violence or creating sustainable pathways toward stability. Lasting peace requires more than formal political settlements. It depends on the active participation of women, young people, and community actors who strengthen social cohesion and sustain peace long after agreements have been signed.

This reality is reflected in the broader international approach to peace and security. While considerable attention and resources are devoted to peacekeeping, peacemaking, mediation, and stabilization efforts, far less investment is directed toward prevention, early warning systems, and the timely responses needed to address risks before they escalate into crises.

◂ Performers during a farewell for the United Nations Mission in Liberia (UNMIL) organized by Liberia Crusaders for Peace, a women-led civil society organization. Women's groups in the region have been instrumental in defusing conflicts, most notably Mano River Women's Peace Network (MARWOPNET), which orchestrated the peace process between Liberia, Sierra Leone, and Guinea

"Conflict rarely erupts without warning. It often takes root in poverty, exclusion, inequality, unemployment, limited economic opportunities, and weak governance

Vast resources are mobilized to support ceasefires, military stabilization, and diplomatic engagement. Yet insufficient attention is given to strengthening the social systems, trusted institutions, and community-based structures that make peace sustainable. As a result, peace agreements may be celebrated internationally while many citizens continue to live in fear, face economic hardship, and have limited access to the services and opportunities necessary for recovery and resilience.

If we are serious about building sustainable peace, prevention must be a central pillar of our efforts. In my experience, conflict rarely erupts without warning. It often takes root in poverty, exclusion, inequality, unemployment, limited economic opportunities, and weak governance. Addressing these issues before they erupt into violence is not only a development imperative – it is among the most effective investments in peace.

This is why advancing the Sustainable Development Goals must be understood as a peacebuilding strategy. By placing people, particularly women and young people, at the center of development efforts, the SDGs help address many of the structural drivers of instability. Innovation and emerging technologies can expand economic opportunities, create jobs, strengthen livelihoods, and empower communities to become agents of development rather than victims of conflict. Prevention, development, and peace are not separate agendas – they are mutually reinforcing pathways toward sustainable stability.

Communities as architects of peace

Community-centered dialogue and negotiation initiatives such as the Mano River Women's Peace Network (MARWOPNET) demonstrate what this approach can achieve. Supported by Femmes Africa Solidarité, MARWOPNET mobilized women across Liberia, Sierra Leone, and Guinea and successfully persuaded the heads of state of the three countries to return to the negotiating table, helping prevent further escalation of violence. In recognition of its contribution to peace and human rights, MARWOPNET received the UN Prize for Human Rights in 2003 from Secretary-General Kofi Annan. That same year, the network

became a signatory to the Liberian Comprehensive Peace Agreement. Its experience demonstrated a powerful lesson: communities are not simply beneficiaries of peace processes – they are often the architects of sustainable peace.

Yet for decades, peace negotiations have largely operated through formal diplomatic channels involving heads of state, armed groups, political elites, and international mediators. These processes are essential. Guns must be silenced and political agreements remain necessary. But they are not sufficient on their own. Women rebuilding trust within communities, young people resisting recruitment into violence, faith and traditional leaders mediating local tensions, and civil society actors monitoring early warning signs must also help shape the peace they are expected to sustain.

This lesson was clearly demonstrated during the Burundi peace process. When Nelson Mandela assumed responsibility for mediating the Arusha negotiations, he first met with Burundian women leaders. He recognized that they possessed a deep understanding of the conflict's root causes and held significant influence within their communities. Their contributions were reflected in the Arusha Peace and Reconciliation Agreement, including provisions relating to women's participation, rights, and post-conflict recovery. Their engagement reinforced a simple but powerful truth: when women help shape peace agreements, they help make peace more sustainable.

Making mediation more inclusive and accountable

The effectiveness of any peace process is closely linked to the quality, credibility, and accountability of its mediators. There is a growing need for more transparent and inclusive mediator selection processes, accompanied by mechanisms that monitor both negotiations and the implementation of peace agreements. Diverse mediation teams should become the norm, with women playing a central role in peace processes. Despite their proven contributions to conflict prevention, negotiation, and reconciliation, women remain significantly underrepresented in formal mediation efforts.

Recognizing this gap, the African Women Leaders Network (AWLN) was established to advance women's leadership in governance, peace, security, and development. AWLN is founded on a simple premise: sustainable peace requires the meaningful participation of women at all levels of decision-making. Women are not merely beneficiaries of peace – they are agents of peace. Evidence consistently shows that peace agreements are more durable when women are meaningfully involved in their negotiation and implementation. According to UN Women, peace processes are 35% more likely to last 15 years when women participate in negotiations.

Investing in the systems that sustain peace

Political settlements must therefore be accompanied by investments in the institutions and community-based infrastructures that sustain peace. This includes supporting civil society organizations, women-led networks, local peacebuilders, and community initiatives. Together, these investments strengthen social cohesion, promote dialogue, and address grievances before they escalate into conflict. If women remain underrepresented in peace negotiations because of a perceived shortage of qualified candidates, then the solution is not exclusion – it is investment. Investing in women's leadership, mediation skills, and participation is essential, as is investing in the institutions and social structures that sustain peace.

> ***"The deepening connections between climate, peace, and security highlight the importance of investing in resilience… Climate action is therefore not only an environmental imperative – it is also a powerful instrument for conflict prevention and sustainable development***

The deepening connections between climate, peace, and security further highlight the importance of investing in resilience. Across Africa, climate adaptation, sustainable livelihoods, and responsible natural resource management can reduce vulnerabilities, strengthen communities, and contribute to long-lasting stability. Climate action is therefore not only an environmental imperative – it is also a powerful instrument for conflict prevention and sustainable development.

This vision aligns closely with both the SDGs and the aspirations of the African Union's Agenda 2063. Neither framework can be achieved without peace – and peace cannot be sustained without development, human rights, and inclusive governance. Together, they provide a roadmap for addressing the interconnected challenges of inequality, insecurity, exclusion, and environmental vulnerability.

My experience has taught me that peace, human rights, and development are inseparable. Too often, these agendas are pursued through separate institutions, funding streams, and policy frameworks, even though they are deeply interconnected.

Sustainable peace requires an integrated approach that places human dignity at its center. When communities are empowered, rights protected, institutions trusted, and opportunities expanded, peace becomes more than the absence of violence. It becomes the foundation for resilience, stability, shared prosperity, and hope for future generations. ■

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Empowering women during humanitarian crises

As conflicts grow more protracted, climate shocks intensify, and aid budgets shrink, gender equality cannot be treated as optional. Women's leadership and rights must be central to effective humanitarian action

By Asya Varbanova, Deputy Chief of Humanitarian Action, UN Women

As 2026 began, amid proliferating armed conflicts and the escalating climate crisis around the world, more than 239 million people were identified as being in urgent need of humanitarian assistance and protection. Conflicts are not only becoming more protracted – they are also growing deadlier, as international humanitarian and human rights law is blatantly disregarded and attacks on civilian infrastructure become more frequent. Today's global crises are also interlinked: three in four people who are forcibly displaced live in countries facing high-to-extreme exposure to climate-related hazards and weather-related disasters, according to a UNHCR report on extreme weather and repeated displacement.

▲ A mentor from Amour Plus facilitates a group discussion for survivors of sexual violence in Kananga, Democratic Republic of Congo

Crises are not gender-neutral. Women and girls are disproportionately

© UN Women/Mona Elfateh

▲ The Al-Wifag Women's Association in Toker, a rural area in northeastern Sudan. The group champions gender equality and economic rights for women, including access to land and leadership opportunities in agriculture

affected due to pre-existing gender inequalities and discriminatory social norms, which limit their access to humanitarian aid, services, resources, and decision-making power.

It is not surprising that the 30-year review of progress on the landmark Beijing Declaration and Platform of Action found that progress for women and girls is slowest in conflict and crisis-affected countries. The review raised the alarm about how ongoing trends may further thwart progress. The data is stark:

- Women and girls in extremely fragile contexts are 7.7 times more likely to live in households below the poverty line of USD 2.15 per day than those in non-fragile contexts.
- Under a worst-case climate scenario, up to 158.3 million additional women and girls could be pushed into poverty by 2050 as a direct result of climate change, surpassing the number of men and boys by 16 million.
- The number of food-insecure women and girls could rise by as much as 236 million, compared with an additional 131 million men and boys.
- The average incidence of child marriage in conflict-affected countries is 14.4 percentage points higher than in non-conflict settings.
- More than a third of maternal deaths occurred in 48 fragile and conflict-affected countries.
- Sexual violence in conflict zones has risen sharply in recent years, while impunity for these violations has remained the norm.
- Girls' educational attainment continues to lag in conflict-affected countries.

Behind these numbers are women and girls who have lost their lives, had their safety and health shattered, their rights eroded, their dignity compromised, and their potential squandered. From Gaza and Sudan to Haiti, Lebanon, and elsewhere, the gendered impacts are both immediate and long term, affecting individuals and societies. They are also not contained within borders. For example, according to a UN Women gender alert on the military escalation in the Middle East, rising food and fuel prices and supply disruptions risk deepening food insecurity and livelihood erosion and increasing unpaid care burdens for women and girls across the Arab region, Asia-Pacific, Africa, and beyond.

A humanitarian system under pressure

The unfolding tragedy of escalating and protracted conflicts and crises and growing humanitarian needs is taking place against a backdrop of several important global trends.

First, recent years have seen a rising backlash against gender equality taking place within the wider context of democratic erosion and shrinking civic space in various countries and regions.

This is influencing government policies as well as mainstream opinions and attitudes – and threatening hard-won gains for women and girls.

Second, the world is experiencing a severe contraction of international aid precisely when it is needed the most. Recent data from the Organisation for Economic Co-operation and Development shows that international aid fell in 2025 by 23.1% in real terms compared with 2024, representing the largest annual drop in the history of official development assistance. This brings aid back to 2015 levels – the year the 2030 Agenda for Sustainable Development began.

As the Global Humanitarian Overview 2025 lays bare, the massive cuts to aid have forced the humanitarian system to do the "cruel math of doing less with less" and "hyper-prioritize" assistance toward those assessed to be in the direst need. The Humanitarian Reset, launched through the Inter-Agency Standing Committee (IASC) in March 2025, aims to make the system faster, lighter, more accountable, and more impactful.

Against this backdrop, the international community needs to take bold and urgent action based on ample evidence of what works and rooted in existing commitments to gender equality and women's rights.

Put gender equality at the center of the reset

First, gender equality needs to be a cornerstone of the ongoing Humanitarian Reset and not seen as a peripheral issue. In the drive for efficiency, simplification, and focus on strictly defined and hyper-prioritized life-saving assistance, there is a risk that implementation of the IASC's commitments to gender equality may fall short. As funding contracts and established universal norms are under attack, now is the time to double down and prioritize interventions led by women and in support of their lives, dignity, and rights. Under the reset, there is a commitment that the humanitarian system will "defend" norms and principles, including on gender equality. The reset's outcomes will depend on how consistently and concretely this is done at different levels – globally and in countries.

A critical pillar is to recognize women's vital and rich contributions in crisis-affected settings and enable their full and equal participation and leadership in decision-making processes. Women and girls are not passive victims or mere recipients of aid – they are responders on the front lines and are shaping the outcomes of crises, as community leaders and organizers, primary caregivers, educators, economic contributors, and peacebuilders. There is plenty of evidence that their leadership is a precondition for effective humanitarian responses, as well as for addressing the root causes of conflicts and for building sustainable recovery and peace.

And yet we are far from achieving longstanding commitments to women's participation and leadership as per the Sustainable Development Goals and the Women, Peace and Security agenda. All too often, participation remains tokenistic and women may have seats but no real influence over decisions made. Whether in internationally led mediation processes, in country-level humanitarian teams and cluster coordination groups, in funding allocation advisory boards, or in other decision-making forums – women need to be equally present and heard, and their perspectives recognized and heeded. They need to be able to exercise this fundamental right safely and without negative repercussions.

Fund women-led and women's rights organizations

Second, women-led and women's rights organizations working in conflict and crisis-affected countries need urgent funding. They were already underfunded and overstretched prior to recent funding cuts. UN Women's report, At a breaking point, warns that these cuts have placed enormous additional strain on their vital work and even their very existence.

Both the quantity and the quality of funding matter. Funding needs to be flexible, multi-year, and reflective of the holistic and transformative nature of their work, which is not only life-saving and life-sustaining but also often encompasses longer-term development, peace, democracy building, human rights, and gender-equality objectives. Both funding and broader political support need to take into account the significant, often overlooked, risks faced in crisis settings by women, girls, gender-diverse leaders, and human rights defenders.

Work across the humanitarian–development–peace nexus

Finally, it is critical that humanitarian, development, and peace actors work more closely and effectively together to address the complex challenges of today's protracted and multifaceted crises. Meeting immediate needs should go hand in hand with building community resilience to disasters, strengthening governance systems, and addressing the root causes of conflict. Gender equality and the empowerment of women and girls need to be embedded throughout this nexus and its various components – from defining collective gender outcomes, to conducting joint gender analysis and assessments, to harmonizing funding streams with gender markers and ambitious targets for funding projects and interventions that address women's specific needs, advance gender equality, or empower women.

The stakes could not be higher. As the international community navigates an era of shrinking resources, eroding norms, and multiplying crises, the choices made now will determine whether women and girls are left further behind or emerge as the architects of more just and resilient societies. Delivering on commitments to gender equality in crisis settings is not a matter of idealism – it is a prerequisite for effective, sustainable, and principled responses. The evidence is clear and the commitments exist. The world cannot afford the cost of inaction. ■

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The hidden toll of maternal malnutrition in conflict settings

Conflict and displacement are driving a largely overlooked crisis in maternal nutrition, with grave consequences for women, babies, and long-term development. Protecting mothers' health is one of the most effective ways to save lives and advance progress across the SDGs in fragile settings

◂A member of a UNICEF-backed mother support group educates a new mother on breastfeeding in Sudan. Nutritional deficiencies during the first 1,000 days of life cause life-long damage, impairing the child's cognitive and emotional development

By Geraldine Anup-Willcocks, International Board Certified Lactation Consultant and Principal Humanitarian Adviser at UNICEF UK; and Óscar Serrano Oria, Senior Nutrition and Early Childhood Development Programs Adviser, UNICEF UK

A mother gazes down at her tiny baby girl – barely the size of a standard bag of sugar. Her baby is too weak to respond, too weak to feed. This longed-for baby was born too early to breastfeed effectively, and too early to survive without support, because her mother has been so poorly nourished herself. This young mother doesn't have the health support she might have had at home – she's been displaced by conflict, and is far from her livelihood, support system, and the midwife who supported her at home. If this tiny baby does survive, the impact of her mother's malnutrition will affect her mind and body for her entire life, limiting her ability to thrive.

This is a scene that happens far too often. At least 1 in 10 babies worldwide is born too early, with maternal malnutrition among the factors that can increase the risk of preterm birth. This leaves newborns weak, vulnerable to disease, and at risk of interrupted breastfeeding.

These risks are intensified by myths that lead mothers to stop nursing even when they can safely continue, such as the belief that stress or poor diet will degrade the quality of their breastmilk. Adolescent mothers face a much higher risk of preterm birth due to physical and emotional immaturity, with around 21 million adolescent pregnancies occurring each year in low and middle income countries. This is particularly common in emergencies, where families may resort to harmful coping strategies like child marriage.

How conflict turns malnutrition into a cycle of harm

Anyone who has had a child will relate to the strong urge to build a secure nest in which to nurture their children. But for over 60 million forcibly displaced women and girls, conflict uproots them from their homes and livelihoods, disrupting access to nutritious food, clean water, and essential healthcare. They are driven to temporary camps and settlements where nutritious food is scarce, clean water is unavailable, and healthcare is absent.

This can set off a dangerous chain reaction. The mother becomes malnourished, restricting her unborn child's growth. Her baby is born prematurely, meaning she needs skilled infant feeding support to produce enough milk, but this is rarely available in displacement settings. The combined stress of her circumstances and the difficulties of feeding her baby slow the flow of her milk, as cortisol inhibits the hormones that help it flow freely. And so, she begins to believe that her supply is insufficient and starts to introduce formula, which she will often have to mix with unsafe water. Her baby then loses the critical protective factors and unequalled nutrition her milk provides. Premature babies are highly vulnerable to malnutrition in emergencies, with an up to 20-fold higher risk of death compared to normal-weight infants.

If this baby survives this hard start in life, the impact of early malnutrition is irreversible, affecting both the baby's physical and mental development. According to UNICEF, about half of children under two who are stunted become so during pregnancy and the first six months of life. And so, the cycle continues: these malnourished babies are at far greater risk of complications during birth, weakened immunity, poor cognitive development – and poorer outcomes for growth, learning, and earning later in life. This is a stark example of how closely linked the Sustainable Development Goals (SDGs) are: failure to achieve SDG 2 on ending hunger undermines SDG 3 on good health, which in turn affects SDGs 4, 5, and 8, as malnutrition limits a child's ability to learn, thrive, and eventually secure decent work.

Maternal malnutrition is most severe in sub-Saharan Africa and South Asia, where conflict and climate shocks are driving acute food insecurity for millions. In conflict-affected countries such as Afghanistan, Chad, Ethiopia, Nigeria, Somalia, South Sudan, Sudan, and Yemen, acute malnutrition among pregnant and breastfeeding women has risen by 25% since 2020, according to UNICEF's Undernourished and

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◂ A six-month-old baby is treated for malnutrition at a UNICEF centre in Gaza City, Palestine

overlooked report. Maternal mortality risks are as extreme as 1 in 134 in Chad, compared to 1 in 12,500 in the UK according to the World Bank. Of the worst affected countries, the funding outlook is bleak, and the situation is rapidly deteriorating. Many of the worst affected countries receive very little media attention, and recent international aid budget cuts have led to around 14 million children facing disruptions to nutrition support. The Standing Together for Nutrition Consortium warn of 369,000 additional child deaths each year and severe threats to maternal survival, with countries like Somalia seeing large numbers of health and nutrition facilities closing down as a result. It's still unclear how deep the aid cuts will be finally, but if current patterns continue, they will fall disproportionately on services for mothers and children, including nutrition.

What must be done

Even within this depressing context, many of those lives can be saved if we focus our resources on the elements that can have a catalytic effect on maternal and child health.

Unlike other areas of humanitarian aid, maternal nutrition and care are quiet but enabling forms of humanitarian work. Everything a baby needs is within the body of her mother – but in conflict settings, investment is required to prevent disruption of this perfect natural system. Though arguably the most impactful interventions, these are not the visible, noisy forms of humanitarian work that we see in television adverts, and so their life-changing impacts are often overlooked. If humanitarian funding can focus resources on the following interventions, we can prevent the cascade of events that so often ensues from maternal malnutrition:

1. Skilled healthcare workers deployed to establish an antenatal and postnatal care service network focused on increasing coverage rapidly and providing the minimum package of visits.
2. Multiple micronutrient supplementation made available as early in the pregnancy as possible, with a focus on ensuring continued access even when populations are displaced.
3. Nutrition counselling packages that can be adapted to realistically include locally available and affordable foods to improve maternal health, along with skilled breastfeeding counselling. These are often best implemented through creating dedicated, safe, welcoming spaces for mothers to gather, feed their babies, and access support.
4. Priority for pregnant and lactating women in targeted cash transfer programs, so that women are not forced to choose between their own nutrition and that of their families.

By focusing our resources on maternal nutrition, we can help break this chain reaction for girls and women in these underreported crises, reducing the number of premature births. Babies will be born stronger and more resilient, better able to breastfeed without intensive feeding support. There will be less need to mix formula with unsafe water or to depend on donated formula. Breastfeeding will help protect the children of displaced mothers, who often face poor nutrition and a lack of access to clean, safe water. Through their mothers' milk, these children also benefit from antibodies that help protect them against diseases such as diarrhea and pneumonia, which remain leading causes of death in children under five in these settings.

Because when we protect maternal nutrition, we do more than prevent immediate harm – we can change the course of a woman's life, and of the lives that depend on her. ■

SDG ACTION

SDG Action was launched in 2021 by the UN Sustainable Development Solutions Network (SDSN) to support the UN's Decade of Action.

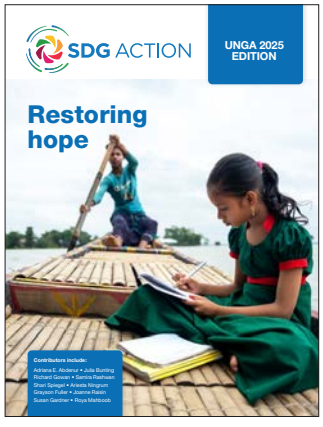
A resource for sustainability practitioners in all sectors, it brings timely analysis of the most pressing challenges. Its emphasis is on identifying opportunities and providing tangible ways to accelerate progress.

The website (www.sdg-action.org) features articles from world-leading experts on all aspects of the Sustainable Development Goals (SDGs) and climate action.

This edition is published to coincide with the UN General Assembly. It provides a framework to understand the complex interdependencies between the SDGs, highlights priorities and dilemmas, and suggests ways to make the greatest impact.

The print edition is carbon-neutral and sustainably produced. The carbon emissions generated in manufacturing the paper, and printing and distributing the publications are offset. This product is made of material from well-managed Forest Stewardship Council®-certified forests, recycled materials, and other controlled sources. The FSC® is a global, not-for-profit organization dedicated to the promotion of responsible forest management worldwide. FSC® defines standards based on agreed principles for responsible forest stewardship that are supported by environmental, social, and economic stakeholders. To learn more, visit www.fsc.org

Please contact us at info@sdg-action.org if you would like to share feedback and ideas or would like to be involved.



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Science for climate policy

The Global Climate Hub (GCH) provides science-based solutions for combating the climate crisis. As an offshoot of the UN Sustainable Development Solutions Network, it harnesses a global network of experts.

The GCH, an international research-led initiative for tackling complex sustainability challenges, works with all relevant stakeholders to design country-specific action plans.

It functions through 9 interlinked units that reflect the stages a country will transition through until it achieves climate neutrality and resilience.

The coordinated work of these 9 units provides a unique approach to holistically addressing all levels of the human-environmental interface, offering truly sustainable solutions tailored to each case study or region.

Located at the ReSEES Laboratory of the Athens University of Economics and Business and the Sustainable Development Unit of the ATHENA Research Center, both of which are part of the Alliance of Excellence for Research and Innovation on Aephoria (AE4RIA), the GCH is also supported by the Atmospheric Physics Department of the Academy of Athens. The Hub is chaired by the world-renowned natural resource economist, Professor Phoebe Koundouri.

SDSN Global Climate Hub

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