



2025 SDG Review: Integrating Governance and Justice in 'Affordable and Clean Energy' Goal Indicators

Margareth Sembiring

After years of development, the global push to transition to low-carbon energy sources has finally institutionalised the *just and inclusive principles*. This is reflected in their recent adoption by the Asia-Pacific Cooperation ([APEC](#)), the [G20](#), the International Energy Agency ([IEA](#)), and [ASEAN](#), among others. In essence, the just and inclusive principles recognise the importance of a people-centred approach in transitioning to low-carbon sources and pay special attention to issues such as the wellbeing of workers affected by reduced use of fossil fuels, and of communities disproportionately affected by renewable energy infrastructure development.

The just and inclusive principles thus bring to fore the governance and justice dimensions of efforts to achieve the Sustainable Development Goal (SDG) on Affordable and Clean Energy (Goal 7). As the global community prepares for the comprehensive review of the 2030 SDG this year, there is a pressing need to assess whether the existing indicators have adequately captured the political, social, and environmental aspects of low-carbon energy transitions.

Revisiting Goal 7 Indicators

Since its inception in 2015, the indicators of Goal 7 of the 2030 SDGs that aims to “ensure access to affordable, reliable, sustainable and modern energy for all” have generally embodied a technocratic understanding of progress. This is evidenced in the formulation of its quantitative indicators

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that measure changes in the number of populations with electricity access, renewable energy share, among others. While the use of technocratic metrics in global governance frameworks such as SDGs is justified, an overreliance on them can potentially produce sanitised representations of progress that obscure underlying tensions and governance failures unfolding on the ground.

Given that Goal 7 inherently encapsulates an aspiration to transition to low-carbon energy sources, the recent global adoption of the just and inclusive principles reveals a critical gap in its current indicators. The transition to low-carbon energy sources is not merely a technical undertaking and goes beyond making deliberate policy choices and investments in favour of renewable energy sources. Instead, it is a systemic transformation that intersects with entrenched societal realities marked by conflicting interests, power asymmetries, and the marginalisation of certain groups in the context of infrastructure-led development.

Renewable Energy Contestation in Southeast Asia

Hydro dam and geothermal projects in Southeast Asia are a case in point. Both sources are considered renewable. While their further expansion will undoubtedly count towards energy transition progress, records of backlash driven by socio-economic and environmental grievances abound. In Indonesia, residents of [Poco Leok](#) in East Nusa Tenggara Province and [Padarincang](#), Serang, Banten Province, have mounted oppositions to proposed geothermal power projects, raising concerns about adverse impacts on the quality of land and water resources. In Thailand, a string of protests and legal challenges have been launched against various hydro dam projects in areas such as [Pak Beng](#), [Nam Choan](#), [Xayaburi](#), and [Yuam/Salween water](#). In Malaysia, an indigenous community filed a lawsuit against a hydro project in Ulu Geruntum, [Perak](#) State.

The underlying drivers fuelling such resistance – strong state-business ties, weak regulatory enforcement, fragmented mandates across different government agencies, inadequate participatory mechanisms in decision-making, and poor compensation packages – are not confined to hydro dam and geothermal projects. These governance failures are increasingly surfacing in other supposedly less disruptive renewable energy projects like solar and wind. In Indonesia, village residents in Guluk-guluk, [Sumenep](#), Madura, East Java Province, protested against the plan to build solar power projects, citing environmental degradation and a lack of direct benefits to local residents. In Vietnam, fishermen in [Bac Lieu](#) Province have expressed concerns

over disruption of income caused by the installation of wind power infrastructure in the area.

Similar tensions are observed in the critical mineral mining sector, which forms the backbone of low-carbon energy transition agenda. In June this year, protests flared up against [nickel](#) mining activities in Indonesia's world-famous UNESCO-site Raja Ampat in Southwest Papua Province.

Way Forward

At this juncture, it is evident that Goal 7 of SDG cannot be assessed solely by electricity access rates or renewable energy shares. Considering the complexity of low-carbon energy transitions, this year's SDG indicator framework review provides a timely space to incorporate justice-oriented dimensions that capture the realities of governance failures, social conflicts, and structural exclusions, on the ground. Doing so will not only reflect more accurately the progress of Goal 7, but also ensure that the governance mechanisms of global energy transitions are accountable to the communities and places most affected by energy transition agenda. Failure to capture these justice-oriented dimensions risks perpetuating contestation and undermining the legitimacy of transition pathways in the years to come.



SUGGESTED READINGS

ACE (ASEAN Centre for Energy) (2025). *A guide to a just and inclusive energy transition in ASEAN*, Jakarta: ACE

lim Halimatusa'diyah (2025). *A call for ecological justice: Why Indonesia's pesantrens 'reject' renewable energy*, *Fulcrum*, 22 May.

Mosler Agencies/ia(cc) (2025). *Indonesia probes alleged nickel mining in world-renowned coral reef haven Raja Ampat*, *Channel News Asia*, 5 June.

Le Quynh (2023). *Vietnam's wind power push comes with environmental risks*, *The Straits Times*, 8 Jan (updated November 25, 2024).

CLIMATE CHANGE



Photo Credit: Freepik.com

NEWS & COMMENTARIES

Not feasible for S'pore to avoid net-zero; all options to cut energy emissions on table: Tan See Leng

It is no longer feasible or practical for Singapore to avoid working towards a net-zero future. Fluctuations in the prices of fossil fuels due to geopolitical conflicts have driven up energy prices.

Chin Hui Shan

The Straits Times | 28 July 2025

Third-hottest July on record wreaks climate havoc

The third-hottest July worldwide ended a string of record-breaking temperatures last month, but many regions were still devastated by extreme weather amplified by global warming.

AFP/dy

Channel News Asia | 7 August 2025

Pakistan's deadly monsoon floods were worsened by climate crisis, study finds

The rainfall from June 24 to July 23 in the Pakistan was 10% to 15% heavier because of climate change, leading to many building collapses in urban and rural areas in the country.

Associated Press

CNN | 7 August 2025

Scientists decry Trump energy chief's plan to 'update' climate reports: 'Exactly what Stalin did'

The US energy secretary, Chris Wright, is facing growing criticism from scientists who say their "worst fears" were realised when Wright revealed that the Trump administration would review and "update" the US's premier climate crisis reports.

Mark Oliver

The Guardian | 7 August 2025

SELECTED PUBLICATIONS

Mapping the impact of extreme weather on global events and mass gatherings: Trends and adaptive strategies

This research analyses events affected by extreme weather in terms of location, purpose, and format using a global sample of 2,091 events reported as disrupted from 2004-2024. Arts, culture and entertainment events, particularly festivals and concerts, bear the brunt of impacts, followed by social and sporting events, although the picture varies among the four countries analysed (the US, UK, Canada, and Australia).

Shawna McKinley, et al.

International Journal of Disaster Risk Reduction, Vol. 127, 105628 | 2025

Prolonged wind droughts in a warming climate threaten global wind power security

Prolonged low-wind events, termed wind droughts, threaten wind turbine electricity generation, yet their future trajectories remain poorly understood. Our analysis suggests that around 20% of existing wind turbines are in regions at high future risk of record-breaking wind drought extremes, a factor not yet considered in current assessments.

Meng Qu, et al.

Nature Climate Change, Vol. 15, pp. 842-849 | 2025

EVENT & ANNOUNCEMENT

International Day of Clean Air for Blue Skies 2025

The International Day of Clean Air for Blue Skies calls upon everyone—from governments and corporations to civil society and individuals—to Invest in #CleanAirNow. By tackling air pollution proactively, we can achieve transformative change and secure healthy air for all.

Worldwide

7 September 2025

ENERGY SECURITY



Photo Credit: Adobe Firefly Generated Images

NEWS & COMMENTARIES

Singapore: IAEA supports Southeast Asia's clean energy ambitions

IAEA Director General Rafael Mariano Grossi visited Singapore recently to reaffirm support to the country and the wider region, as interest grows in Southeast Asia for nuclear power and technology. The National University of Singapore's Nuclear Research and Safety Institute (SNRSI) invited Mr Grossi to deliver the S R Nathan Fellowship Lecture on the global energy landscape and renewed momentum for nuclear energy.

IAEA News

29 July 2025

Building ASEAN's sovereign energy bloc: The only play to defy global volatility

In order to build a sovereign energy bloc, the region must act now – strengthening domestic clean energy systems, building seamless regional connections, and laying the policy and financial groundwork for a truly integrated power market.

Kavita Gandhi

Asian Power | 2 Aug 2025

No justice in Just Energy Transition Partnerships for Southeast Asia

Just Energy Transition Partnerships (JETPs) fail to address the historical inequalities underlying climate responsibility. Countries such as Indonesia and Vietnam have contributed a tiny fraction of cumulative global emissions, yet they are offered transition packages dominated by debt.

Terri Chapman

Observer Research Foundation | 3 August 2025

As China's renewable capacity soars, utilisation lags, data show

Underutilisation of renewables is spurring China to switch its focus from rapidly building renewable plants to making sure more of their power gets into the grid, analysts say.

Colleen Howe

Reuters | 5 August 2025

SELECTED PUBLICATIONS

Enhancing nuclear and radiological security in polarized times: Safeguarding against extremist insider threats

This article provides an overview of the intersections between rising domestic extremism, insider threats, and risks posed by radiological materials.

Jessica Baweja, Madelyn Dunning, and Keithan Rogers

International Journal of Nuclear Security, Vol. 9, No. 3 | 2025

Tracking SDG7: The energy progress report, 2025

This report summarises global progress on electricity access, clean cooking, renewable energy, energy efficiency, and international cooperation to advance SDG 7.

International Energy Agency

2025

EVENT & ANNOUNCEMENT

Energy Efficiency for Affordable Homes and Workplaces

This conference covered key policies and implementation tools underpinning the building sector's contribution to doubling the rate of energy efficiency improvement between now and 2030, and to energy security, affordability, and competitiveness.

Recorded Conference

19 June 2025

FOOD SECURITY



Photo Credit: Adobe Firefly Generated Images

NEWS & COMMENTARIES

Beyond food abundance: Rethinking food security in Singapore

Singapore's robust food supply resilience is well-known. Food security, however, could be complemented by greater attention to an often-overlooked and under-represented aspect in mainstream discourse – access. The challenges faced by food-insecure individuals underscore the need for a more comprehensive understanding of what food security truly entails.

Kayven Tan

RSIS Commentary | 23 July 2025

Global hunger declines, but rises in Africa and western Asia: UN report

According to the recently published *The State of Food Security and Nutrition in the World (SOFI 2025)*, an estimated 8.2 percent of the global population, or about 673 million people, experienced hunger in 2024, down from 8.5 percent in 2023 and 8.7 percent in 2022. However, progress was not consistent across the globe, as hunger continued to rise in most subregions of Africa and western Asia.

World Health Organisation

28 July 2025

China investing US\$350 million in Angolan agriculture in drive to boost food security

China is investing hundreds of millions of US dollars to develop soybean and grain farms in Angola as it seeks to reduce its reliance on the United States for supplies and improve food security. China's actions in Angola highlight its strategic shift towards Africa for food security, especially given recent trade tensions with the US.

Jevans Nyabiage

South China Morning Post | 2 August 2025

South Korea to host APEC ministerial meeting on food security

South Korea will host a meeting of agriculture ministers from the Asia-Pacific Economic Cooperation member economies this week-end to discuss measures to bolster food security in the region. The meeting will also explore ways to harness artificial intelligence technology to drive agricultural innovation and respond to challenges posed by climate change and supply chain instability.

Yonhap News Agency

The Korea Herald | 4 August 2025

SELECTED PUBLICATIONS

The state of food security and nutrition in the world 2025

The annual flagship report provides the latest global estimates and trends on hunger, food insecurity and malnutrition. The 2025 edition highlights how persistent food price inflation has eroded purchasing power, particularly for low-income and vulnerable populations, undermined access to healthy diets and contributing to rising food insecurity. It also emphasises the need for coordinated fiscal policies and investment in more resilient agrifood systems to mitigate future shocks and accelerate progress toward ending hunger and malnutrition.

FAO, IFAD, UNICEF, WFP, WHO
2025

Enhancing climate resilience through resource conservation practices in watershed of Western India

This study evaluates the effectiveness of the applied climate-resilient practices in a semi-arid watershed in Western India using different indices. The findings of the study demonstrate that targeted soil and water conservation practices can have tremendous benefits by reducing soil erosion substantially, ensuring adequate water availability, and improving resilience to climate variability. Such measures, based on a watershed scale, can provide a model for other vulnerable areas to follow for sustainable development to achieve food security and adapt to the vagaries of climate change.

Gaurav Singh, et al.

Frontiers in Sustainable Food Systems | 2025

EVENT & ANNOUNCEMENT

Strengthening National Science – Policy Interfaces for Agrifood systems: Insights and Reflections

This webinar hosted by the Food and Agriculture Organisation (FAO) presented key insights from FAO's new Guidance on strengthening national science-policy interfaces (SPIs) for agrifood systems, ahead of the 2nd UN Food Systems Summit Stocktake (UNFSS+4) in Ethiopia. It explored how SPIs can foster inclusive, evidence-informed policymaking to accelerate the transformation of agrifood systems. SPIs bring together diverse perspectives and social values, making them particularly well-suited for addressing complex and often contentious issues in agrifood systems.

Recorded Webinar

29 July 2025



Photo Credit: Adobe Firefly Generated Images

NEWS & COMMENTARIES

Caffeine pouch craze: A teenage trend troubling some experts

Caffeine pouches are popular among US teens for energy, but experts warn of health risks, addiction, and hidden use. High caffeine levels can cause serious health side effects, especially in young people. Experts worry the trend may take off in the UK as well.

Michelle Roberts

BBC News | 1 Aug 2025

Locally developed VR tool can detect pre-dementia with almost 90% accuracy

SingHealth's virtual reality (VR) tool Cavire-2 assesses six cognitive functions through daily tasks in local settings, achieving 88.9% accuracy in detecting mild cognitive impairment, comparable to standard tests, with plans to monitor dementia prevention and undergo expert review.

Zhaki Abdullah

The Straits Times | 5 Aug 2025

Think menopause symptoms start at 50? Debunking myths about the change

Singaporean women reach menopause around 49, with symptoms lasting years. Beyond hot flushes, low oestrogen affects mood, sleep, bones, and urinary health. Menopausal hormone therapy (MHT) and vaginal oestrogen safely relieve symptoms, enhancing quality of life.

Joyce Teo

The Straits Times | 6 Aug 2025

What is Chikungunya? A guide to the virus spreading in China

Chikungunya, a mosquito-borne virus causing fever and joint pain, is spreading in southern China, with over 7,700 cases in Guangdong. Authorities are intensifying mosquito control and public measures. The disease can cause long-term disability but is rarely fatal, and at the moment it is not human-transmissible.

Agence France-Presse

Sciencealert | 7 Aug 2025

SELECTED PUBLICATION

Human exposure to harmful urban traffic noise pollution levels: A case study from Seoul, South Korea

The study found that road traffic noise exceeds WHO safety limits in urban areas, especially in commercial and industrial zones, increasing health and cardiovascular risks. Findings highlight an urgent need for policy action to mitigate health impacts of noise pollution in densely populated cities.

Nam-gun Kim, et al.

Scientific Reports Nature | 2025

Menopausal status, transition, and age at menopause with accelerated biological aging across multiple organ systems: Findings from two cohort studies

Menopause accelerates biological aging, especially in the liver, metabolic, and kidney systems. The transition phase shows strongest effects, highlighting a key window for interventions to improve women's long-term health and longevity.

Yi Xiang, et al.

BMC Medicine | 2025

EVENT & ANNOUNCEMENT

Singapore Health and Biomedical Congress (SHBC) 2025

SHBC2025 emphasizes meaningful, human-centred use of technology in healthcare, advocating for improved outcomes, equity, and patient experiences through smart tools, innovation, and collaboration. The event from 9-10 October, features global experts, more than 20 sessions, and a scientific competition. More than 2000 professionals will convene to share their expertise in healthcare at the congress.

Singapore EXPO

9-10 Oct 2025

BIOSECURITY



Photo Credit: Adobe Firefly Generated Images

NEWS & COMMENTARIES

Indonesia, Australia boost biosecurity through workshop

The Indonesian Quarantine Agency and Australia's Department of Agriculture, Fisheries and Forestry (DAFF) held a workshop to strengthen biosecurity cooperation between the two countries. Some notable themes discussed during the workshop include agricultural development and food security.

Antara News

3 July 2025

Child hospitalised as bird flu cases climb in Cambodia

Cambodia's Ministry of Health recently confirmed the country's twelfth human case of H5N1 avian influenza so far this year. To date, there is no evidence of human-to-human transmission. But the steady increase in cases has renewed attention to the risks posed by H5N1. This highly pathogenic bird flu virus spreads rapidly among poultry and occasionally jumps to humans – often with deadly consequences.

Divya Venkatesh

The Conversation | 10 July 2025

Australia's PM says easing of curbs on US beef not prompted by Trump

Australia's Prime Minister Anthony Albanese said a decision to ease rules on U.S. beef imports was not prompted by U.S. President Donald Trump. In place since 2003, the curbs were placed due to concerns about mad cow disease which can kill cattle as well as people who eat infected beef.

Reuters

27 July 2025

UNIDIR Unveils Strategy to Bolster Biosecurity Awareness Among Scientists

As global life science research accelerates, the risks of misuse – either by accident or intent – are becoming more acute. In response, the United Nations Institute for Disarmament Research (UNIDIR) has called for a global shift in how life scientists are educated about biosecurity, biosafety, and dual-use concerns.

Global Biodefense

6 August 2025

SELECTED PUBLICATIONS

What are desirable biosecurity trainings for veterinary practitioners and farmers?

Effective biosecurity training is essential for disease prevention in livestock systems; however, substantial gaps persist. This paper recommends focusing on developing species-specific modules that embed communication and cost-benefit elements, providing micro-learning units for time-constrained farmers, and operating within a tiered certification framework linked to continuing professional development to bridge the gaps.

Anna Maria Iatrou, et al.

Journal of Biosafety and Biosecurity, Vol. 7, No. 2 | 2025

One risk assessment for genetically modified plants

To avoid redundancies in the regulation of genetically modified (GM) plants, this study proposed a model for one global risk assessment which encourages the sharing of food, feed and environmental risk assessment summaries between countries while maintaining national approvals for GM plants.

Muffy Koch, et al.

Frontiers in Bioengineering and Biotechnology, Vol. 13 | 2025

EVENT & ANNOUNCEMENT

The 12th Asian Conference on Safety & Education in Laboratory

The conference will mainly focus on the role of AI in the age of rapid technological advancement, advancing health management system, and its real world applications; and issues of laboratory safety and sustainability.

Singapore Institute of Technology

12-14 November 2025

MIGRATION



Photo Credit: Wikimedia Commons

NEWS & COMMENTARIES

Towards 2030: SDGs and the protection of labour migrant rights

Migration is a cross-cutting issue across the SDGs, with all 17 goals comprising targets and indicators that are relevant to migration and mobility. Ensuring that the rights of migrants are protected is integral to actualising the 2030 Agenda for Sustainable Development.

Danielle Lynn Goh

NTS Bulletin | 24 July 2025

Cambodia migrant workers count costs of conflict after fleeing Thailand

Thousands of Cambodian migrant workers crossed the border to return to Cambodia from Thailand, amid fears on attacks on Cambodian citizens by Thai nationalists during the escalation of conflict between the two countries, which ended in a ceasefire on 28 July 2025.

Chantha Lach and Zaw Naing Oo

The Star | 30 July 2025

Second-largest population increase in England and Wales in over 75 years - mainly fuelled by migration

The population of England and Wales has grown by more than 700,000 in the year to June 2024, fuelled by international migration, accounting for 690,147, or 98% of the total.

Sky News

30 July 2025

Over 60 African migrants killed and dozens missing after boat capsizes near Yemen, says UN

A boat capsized in waters off Yemen's coast leaving 68 African migrants dead and 74 others missing. The tragedy was the latest in a series of shipwrecks off Yemen that have killed hundreds of African migrants fleeing conflict and poverty in hopes of reaching the wealthy Gulf Arab countries.

Associated Press

CNN | 4 August 2025

SELECTED PUBLICATIONS

How can labor migration policies help tackle Europe's looming skills crisis?

Europe is facing a looming skills crisis, with three-quarters of small and medium-sized enterprises across various sectors reporting difficulties finding workers with the right expertise and experience. Responding to these skills shortages can include labour migration, reforming and expanding training opportunities for workers across Europe and improving working conditions.

Kate Hooper, Tesseltje de Lange and Jasmijn Slootjes

Migration Policy Institute | 2025

Child labour – Global estimates 2024, trends and the road forward

This publication provides an overview of child labour patterns and trends. It also describes the evolving profile of children in child labour, outlines the nature of child labour and where it is concentrated, and explores the impact of child labour on schooling.

ILO-UNICEF

2025

EVENT & ANNOUNCEMENT

Migration Power in International Politics: Origins, Evolution, and Future Directions

This upcoming talk by Professor Gerasimos Tsourapas, Professor of International Relations at the School of Government, University of Birmingham, and Editor-in-Chief of Migration Studies (Oxford University Press), examines the concept of migration power and how migration has become a critical instrument of foreign policy.

Hybrid (Zoom and National University of Singapore)

9 September 2025