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GUEST EDITORIAL

Empowering the Planet: The 2025 Earth Day Resolution

DOLLY PRIATNA[1,4,*], KATHRYN A. MONK[2], SHUJAUL MULK KHAN[3]

[1]Graduate School of Environmental Management, Pakuan University, Jl. Pakuan PO Box 452, Bogor 16143, Indonesia
[2]Biosciences Department, Swansea University, Wallace Building, Singleton Park, Sketty, Swansea SA2 8PP, United Kingdom
[3]Department of Plant Sciences, Quaid-i-Azam University, Islamabad Capital Territory 15320, Pakistan
[4]Belantara Foundation, Cashbac Building 3rd Fl., Jl. Timor No. 6, Jakarta 10350, Indonesia

[*]Corresponding author: *dollypriatna@unpak.ac.id*

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ABSTRACT

Earth is the only known planet that supports life, including humanity. Despite seeing ourselves as the most intelligent species in our world, human activities are accelerating the Earth toward irreversible environmental degradation. The consumption of fossil fuels to satisfy our growing demands has led to unprecedented greenhouse gas emissions, pushing the planet toward a potential sixth mass extinction. The rapid rise in carbon dioxide and global temperatures threatens the survival of numerous species, including humanity. Without urgent, collective action to reduce emissions and implement adaptation and mitigation strategies, Earth's ecosystems face catastrophic disruption. Every year on April 22, over one billion people celebrate Earth Day to raise awareness and renew our commitment to protecting our planet. In 2025, under the theme "Our Power, Our Planet," we are reminded of our collective ability to drive transformative change. The coming decades will test human wisdom and willpower. Immediate and sustained action is essential to transition to clean energy, protect biodiversity, and ensure a sustainable future for all.

Keywords: *Clean energy, climate change, Earth Day, fossil fuels, GHG emissions, sustainability*

EARTH IS OUR ONLY HOME—PROTECTING IT IS NOT A CHOICE, BUT AN URGENT NECESSITY

The time for meaningful action is running out, and the consequences of inaction are dire. In the past decade, approximately 86% of global energy consumption has continued to rely on fossil fuels. This heavy dependence has contributed significantly to environmental degradation, primarily through increased greenhouse gas emissions (GHGs) and accelerated climate change. According to the IEA's Stated Policies Scenario (International Energy Agency, 2024) and the BP Energy Outlook (2024), fossil fuels are projected to account for around 65–70% of the global energy mix by 2050 under the Business-As-Usual (BAU) scenario—equivalent to two-thirds of total energy use—if no substantial structural changes are implemented.

This projection remains far from the trajectory needed to meet global climate targets. The decline in coal use has been slow, particularly in developed countries. Meanwhile, fossil fuel demand remains high in sectors like transportation and petrochemicals. The use of natural gas is also increasing, especially in Asia where it is often promoted as a "transition fuel." While the renewable energy sector is expanding, its growth is not yet rapid enough to significantly displace fossil fuels.

As a result, global CO_2 emissions continue to rise and are expected to peak at dangerously high levels. Under the BAU scenario, the world is likely to experience a temperature increase of 2.5–3°C before 2100, accompanied by more extreme weather events, rising sea levels, and deepening global inequality, disproportionately affecting the most vulnerable countries.

EARTH DAY 2025: A CALL TO COLLECTIVE ACTION

Earth Day is observed annually on April 22 as a global event to raise awareness and inspire action for environmental protection. First celebrated in the United States in 1970, it has since grown into a worldwide movement involving more than 190 countries. In 2025, Earth Day marks its 55th anniversary under the theme "*Our Power, Our Planet*", underscoring the essential role of clean energy and the power of collective human action in protecting the planet.

The theme calls upon us all to accelerate the transition from fossil fuels and invest in sustainable energy solutions. Earth Day 2025 arrives as the world approaches key climate deadlines, particularly the 2030 targets set under the Paris Agreement. This Earth Day is not just a celebration but a critical call to action—an urgent plea to reclaim our collective power through clean energy and shared responsibility for the well-being of our only planet.

A meaningful reduction in global CO_2 emissions requires collective effort from all levels of society. Governments play a foundational role by enacting robust policies, ending fossil fuel subsidies, and investing in renewable technologies.. Their leadership in setting national targets and funding innovation is crucial for driving systemic change. Businesses, as major emitters, must commit to decarbonising their operations, adopting sustainable practices, and supporting green innovation. Communities have the power to lead grassroots

initiatives—developing local renewable energy projects, raising awareness, and ensuring that the energy transition is inclusive and responsive to local needs. Individuals also hold significant power: through conscious decisions to reduce energy consumption, adopt cleaner transport options, switch to renewable energy sources, and advocate for climate policy, every person can be a catalyst for change (Priatna & Khan, 2024).

The clean energy transition is not the task of any single group. When governments lead, businesses innovate, communities mobilize, and individuals engage, a low-carbon future is not only possible—it becomes unstoppable.

UNDERSTANDING THE EARTH'S DAY 2025 THEME: "*OUR POWER, OUR PLANET*"

The 2025 Earth Day theme, "*Our Power, Our Planet*", calls on us to recognize and harness our collective power in addressing the global climate crisis. In this context, "power" transcends its association with energy generation; it represents our capacity to drive meaningful change through technological innovation, political engagement, and individual responsibility.

Technological Power refers to the innovative tools and solutions, such as renewable energy technologies, that enable the transition from fossil fuels to sustainable alternatives. Solar panels, wind turbines, electric vehicles, and energy storage systems are among the robust solutions that can reduce carbon emissions and help build a clean energy future. By innovating and advancing these technologies, society can transition to a sustainable energy system that supports people and the planet.

Political Power is the ability of governments, institutions, and citizens to shape policies that protect the environment. Effective climate legislation, clean energy incentives, and international cooperation are essential for driving large-scale change. Citizens also hold political power by voting, organizing, and holding their leaders accountable. Technological innovations need urgent political will to achieve their full potential.

Individual Power lies in our everyday choices--reducing energy consumption, supporting green businesses, and advocating for environmental change. While these actions may seem small on their own, they contribute to significant change when taken collectively. So, the theme "*Our Power, Our Planet*" reminds us that saving the Earth is not just about science or policy, it is about human will and responsibility. Whether through technological innovation, political action, or everyday choices, we all have the power to shape a cleaner, fairer, and more sustainable future.

Clean Energy is essential to address environmental degradation and promote sustainable development. As long as the world continues to rely on fossil fuels, which contribute to GHGs and air pollution, transitioning to clean energy sources is essential to mitigate climate change and protect public health. Clean energy not only supports economic growth but also improves quality of life by reducing health risks associated with pollution.

There are several reasons why clean energy is vital to saving the planet. First, it helps protect the environment. Clean energy sources like solar, wind, and biomass produce fewer emissions than fossil fuels, significantly reducing air and water pollution (Bourland & Hernandez, 2014) (Arshad, 2017). Adopting clean technologies also helps to reverse biodiversity loss and prevent catastrophic environmental changes caused by climate change (Roehrl, 2016; Priatna & Monk, 2023b). Second, clean energy offers significant health benefits. Transitioning away from fossil fuels can prevent thousands of deaths annually from air pollution, utimately improving public health (Bourland & Hernandez, 2014). Furthermore, clean energy reduces competition for water resources, which is especially important in drought-prone areas, thus helping to manage resource more effectively (Bourland & Hernandez, 2014).

The global movement to shift from fossil fuels to clean energy is not solely in the hands of governments and industry. Individuals and society also have a crucial role in accelerating this transition and creating sustainable climate solutions. People can contribute by making more sustainable choices in their daily lives, such as using energy-efficient appliances, reducing car trips by walking or cycling, installing rooftop solar panels, and supporting green energy providers. Additionally, individuals can reduce their carbon footprint by conserving electricity, adopting plant-based diets, and minimizing waste. When millions of people make these small changes, collectively they can significant reducei the demand for fossil fuels.

Communities play a key role in amplifying these efforts. They can initiate local clean energy projects, such as community-based solar energy and hydro-powered electricity programs and advocate for clean energy policies. Around the world, some communities are working together to bring renewable energy to schools, clinics, and rural homes, improving quality of life while reducing emissions (Gul et al., 2022; Rana et al., 2024). Through community engagement, citizens can influence the broader system by electing climate-focused leaders, participating in environmental campaigns, and pressuring companies and policymakers to act responsibly. Individuals and communities are at the heart of the clean energy revolution, creating demand, building resilience, and inspiring systemic change—starting locally but resonating globally.

Additionally, as individuals we can reduce our carbon footprint by conserving electricity, adopting a plant-based diet, and minimizing waste. It is also crucial to increase the number of plants grown to maximize carbon dioxide (CO2) sequestration from the atmosphere (Ali et al., 2022, 2023). Similarly, the Earth has become a repository for the pollutants produced by human activities. Plants of different kinds can act as environment cleansers through natural processes such as phyto-accumulation, phyto-stabilization, phyto-attenuation, and phyto-remediation (Ahmad et al., 2021, 2023, 2025; Ejaz et al., 2025). Conserving the existing plant life is also critical for maintaining genetic and cultural diversity, ensuring food security and safety, improving air and water quality, sequestering carbon, and supporting ecosystem services and functions (Teixidor et al., 2025; Ullah et al., 2024; Ozturk et al., 2022; Rahman et al., 2021; Manana et al., 2020, Khan et al., 2018).

CURRENT ENVIRONMENTAL CHALLENGES AND THE CALL FOR ACTION

The environmental impacts of fossil fuel consumption are profound, primarily through the release of GHGs such as CO_2 and methane. These emissions are driving global

warming and causing widespread ecological disruptions. Fossil fuel combustion accounts for about 84% of global CO_2 emissions, increasing atmospheric CO_2 levels from 280 ppm in 1750 to 428 ppm in March 2025 (Emberson et al., 2012; Michaelides, 2012; NOAA 2025). This increase in CO_2 is linked to a 0.6 °C rise since the late 19th century, with projections indicating a further increase of 1.4 to 5.8°C by 2100 (Ross & Piketh, 2005; Soeder, 2021). As GHG levels rise, they contribute to climate disruption, including more frequent extreme weather events, ocean acidification, and rising sea levels that threaten coastal areas (Bess, 2022).

Feedback mechanisms, such as thawing permafrost and increased water vapor, exacerbate warming, creating a self-reinforcing cycle (Bess, 2022). In addition, fossil fuel emissions contributing to air pollution lead to acid rain and ecosystem ecosystems, affecting biodiversity and water quality (Emberson et al., 2012; Michaelides, 2012). Air pollutants, including sulphur dioxide and nitrogen oxides, pose increasing threats to human health and ecosystems (Emberson et al., 2012). Increasing vegetation cover, especially through green building in urban areas, can help reduce air pollution to more acceptable levels (Qamar et al., 2024).

As described above, globally we face the growing threat of climate change, driven mainly by our reliance on fossil fuels—coal, oil, and gas. These energy sources, having powered economies for over a century, come at a steep price: rising GHGs, global warming, pollution, and ecosystem destruction. However, there is hope. Clean energy, including solar, wind, hydroelectric, geothermal, and modern bioenergy sources, offers a powerful solution. These renewable sources produce little to no carbon emissions and are sustainable, meaning they will never run out.

Clean energy is not only about environmental benefits. It is intricately connected to public health. Fossil fuel pollution causes millions of premature deaths each year, but clean energy can provide cleaner air and water, and healthier communities. Economically, the renewable energy sector also stands out as one of the fastest-growing industries in the world, with the potential to create millions of jobs in solar panel installation, wind farms maintenance, battery storage innovation, and energy efficiency. Moreover, clean energy enhances energy independence, enabling countries and communities to reduce their dependence on imported fuels and control their energy future. Solar panels and micro-hydro systems can provide reliable electricity to homes, schools, and hospitals, even in the remotest locations.

Most importantly, clean energy is about equity. For too long, the impacts of pollution and climate change have disproportionately affected vulnerable and marginalized communities. Clean energy offers a pathway to a more just and inclusive world where everyone can access affordable, sustainable energy.

However, the energy transition cannot happen without concerted action. Governments must enact strong policies, invest in renewable infrastructure, and end fossil fuel subsidies. Businesses must innovate, invest in clean technologies, and take responsibility for their environmental impact (Priatna et al., 2023). Communities must lead local energy projects and advocate for cleanere solutions. Much crucially, individuals must make conscious choices: using less energy, supporting green products, speaking out, and inspiring others. Together, we have the power to make change. *Our Power, Our Planet* is the theme of Earth Day 2025, and it serves as a powerful reminder that we all share one Earth, and have the collective responsibility to protect it.

OVERCOMING BARRIERS

The global transition from fossil fuels to clean energy is essential to addressing climate change, protecting public health, and building a sustainable future. However, significant barriers remain, including cost, access, and political will. Coordinated action across all sectors is necessary to overcome these barriers and ensure a smooth transition to renewable energy sources such as solar, wind, and hydropower.

First, the high cost of clean energy technologies is still a major barrier, especially in low- and middle-income countries. While the cost of clean energy technologies has dropped, upfront investment costs in infrastructure and technology remain high (Obuseh et al., 2025, Ratna et al. 2022). Governments and international institutions must reallocate subsidies from fossil fuels to clean energy and ramp up investments in R&D to reduce costs. Scaling up deployment will drive down costs, making clean energy more accessible and affordable globally.

Second, access to clean energy must be expanded, especially in remote and underserved communities (Stein, 2017). Many areas lack the infrastructure to connect to the national electricity grid (Obuseh et al., 2025), making decentralized energy solutions, such as off-grid solar systems and community-based microgrids, a practical alternative. Inclusive financing models such as microloans or pay-as-you-go schemes can help bring renewable energy to these areas. To ensure long-term sustainability, investment in human resources is essential, empowering local workers to maintain and manage clean energy systems.

Third, a lack of political will continues to hamper progress (Jacobson, 2023; Cohen, 2015). Political commitment is crucial for implementing strong climate policies, enforcing emissions regulations, and supporting clean energy development (Cohen, 2015). Public engagement is critical in pressuring leaders to prioritize climate policies and enforce emissions regulations (Priatna & Monk, 2023a). International cooperation, such as the Paris Agreement and the Sustainable Development Goals (SDGs), can help set shared targets and mobilize resources for the global energy transformation.

Whilst the clean energy transition presents complex challenges, these barriers are not insurmountable. With strategic investments, inclusive access strategies, and strong political leadership the world can move toward a clean energy future. Overcoming these barriers is not only necessary for climate stability but also a moral imperative for social equity and intergenerational justice.

Successful clean energy initiatives, such as solar villages in Indonesia and green cities in Europe, showcase the potential of renewable energy technologies to transform urban communities and environments, These initiatives demonstrate that a clean energy future is achievable and sustainable.

Indonesia has made some progress in renewable energy, particularly in geothermal and solar power. Rural solar villages are increasing energy access (Ramadan et al., 2024) and the planned Indonesian capital city (IKN) will aim for 100% green energy by 2045 through extensive integration of solar and hydropower (Yudiartono et al., 2024). The success of these

initiatives is supported by policies promoting renewable energy and energy efficiency, but challenges such as infrastructure and investment remain (Ramadan et al., 2024). Similarly, several European cities such as Freiburg and Malmö have become models of renewable energy integration in urban planning, utilizing solar power, green roofs, and nature-based solutions (Zaręba et al., 2017; Liu et al., 2023). These cities focus on achieving climate neutrality through innovative designs, combining solar technologies and sustainable practices to increase climate change resilience (Liu et al., 2023).

Successful projects often involve citizen participation, fostering a sense of ownership and commitment to sustainability (Liu et al., 2023). Although challenges like high costs, technical expertise, and infrastructure limitations remain, these initiatives show that with continued efforts and innovation, we may realize the full potential of clean energy.

THE FUTURE WE CHOOSE

By 2030 and beyond, the world looks to a future powered by clean, renewable, and inclusive energy systems. In this vision, energy is no longer a source of pollution and inequality but a driver of climate stability, social equity, and sustainable development. Clean energy sources such as solar, wind, hydro, and geothermal will form the backbone of the global energy supply. Rapid technological advances, falling costs, and strong policy support will make renewable energy more accessible and efficient. Fossil fuels will be largely phased out, drastically reducing GHGs and improving air quality.

Most importantly, the clean energy transition will prioritize equity and inclusion. Rural communities, marginalized groups, and developing countries will have equitable access to modern energy services. Decentralized energy systems, such as off-grid solar, community wind farms, and local battery storage, will empower every member of society to produce and control their energy. Green economy jobs will be distributed equitably, with opportunities for all genders, ages, and social backgrounds.

This vision requires a resilient energy system that can adapt to climate impacts and meet growing demand without damaging ecosystems. Energy efficiency, circular economy principles, and just transition policies will ensure that the shift to renewable energy benefits both people and the planet. This vision is not, therefore, just about cleaner energy; it is about energy that is equitable, accessible, and sustainable for all.

Individually, we must act today by reducing our reliance on fossil fuels through lifestyle changes and supporting clean energy policies that promote equity and sustainability:

1. Start with lifestyle changes that reduce reliance on fossil fuels. Such changes include using energy-efficient appliances, opting for renewable energy sources, limiting car travel, and minimizing overall energy consumption. Supporting sustainable consumption, such as eating locally and reducing waste, also reduces energy demand and environmental impact.
2. Drive broader change through advocacy. By electing climate-conscious leaders, supporting clean energy policies, and joining local or online environmental movements, every individual can influence decisions at the community and national level (Priatna & Monk, 2022).
3. Share knowledge about the benefits of clean energy, climate issues, and energy justice in schools, workplaces, or social media (Priatna & Khan, 2024).

Ultimately, energy is not just a technical issue; it is an equity issue. Millions of people worldwide still lack access to electricity, while many more suffer from the pollution caused by fossil fuels. A clean and equitable energy system must ensure that everyone has access to safe, sustainable energy, regardless of where they are, how much they earn, or their social status.

This vision for 2030 and beyond offers hope. Rather than remaining trapped in a cycle of environmental destruction, we can build a better future with solar-powered schools, wind-powered villages, and communities empowered to control their own energy. Most importantly, the future calls us to action, through learning, changing habits, and speaking out. The choices we make today will determine a healthier, fairer, and more sustainable future for generations to come.

CONCLUSION

Earth Day 2025's theme, "*Our Power, Our Planet*" calls for collective action to address the global climate crisis. Technological innovation, political commitment, and personal responsibility are essential for achieving this goal. Transitioning to clean energy sources is not just critical for environmental protection, it is vital for public health, economic growth, and social equity.

Individuals can contribute by making sustainable choices, supporting green businesses, and reducing their carbon footprint. Communities can play a crucial role by initiating local clean energy projects, raising awareness, and advocating for policies that promote sustainability. By electing climate-conscious leaders and participating in environmental campaigns, communities can drive systemic change and help build a more resilient, sustainable energy future.

Our future depends on the choices we make today. "*Our Power, Our Planet*" is not just a theme—it is a reminder that we hold the power to shape a future where sustainability and equity are the foundation. With the technology, knowledge, and collective power we have, we can protect our Earth. But to do so, we must act with purpose, courage, and unity. Let us rise to this challenge, act with urgency, and ensure a thriving, sustainable world for future generations.

The time to act is now—our future depends on the choices we make today.

REFERENCES

Ahmad, Z., Khan, S. M., Ullah, A., Afza, R., & Yang, J. (2025). Source apportionment, carcinogenic and non-carcinogenic risks assessment of soil heavy metals in marble waste polluted environment; role of vegetation in risk mitigation. *Journal of Hazardous Materials Advances, 18: 100689*.

Ahmad, Z., Khan, S. M., Page, S. E., Balzter, H., Ullah, A., Ali, S., & Mukhamezhanova, A. S. (2023). Environmental sustainability and resilience in a polluted ecosystem via phytoremediation of heavy metals and plant physiological adaptations. *Journal of Cleaner Production, 385: 135733*.

Ahmad, Z., Khan, S. M., & Page, S. (2021). Politics of the natural vegetation to balance the hazardous level of elements in marble polluted ecosystem through phytoremediation and physiological responses. *Journal of Hazardous Materials, 414: 125451*.

Ali, S., Khan, S. M., Ahmad, Z., Siddiq, Z., Ullah, A., Yoo, S., & Raposo, A. (2023). Carbon sequestration potential of different forest types in Pakistan and its role in regulating services for public health. *Frontiers in Public Health, 10: 1064586*.

Ali, S., Khan, S. M., Siddiq, Z., Ahmad, Z., Ahmad, K. S., Abdullah, A., & Abd_Allah, E. F. (2022). Carbon sequestration potential of reserve forests present in the protected Margalla Hills National Park. *Journal of King Saud University-Science, 34(4): 101978*.

Arshad, M. (2017). *Clean and Sustainable Energy Technologies* (pp. 73–89). Academic Press. https://doi.org/10.1016/B978-0-12-805423-9.00003-X

Bourland, D., & Hernandez, Y. (2014). Cleaner energy and health: household, local and global benefits. *Community Development Investment Review, 01: 023–026*. https://ideas.repec.org/a/fip/fedfcr/00029.html

BP Energy Outlook (2024). BP Energy Outlook 2024 Edition. Website: https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/energy-outlook/bp-energy-outlook-2024.pdf

Bess, M.D. (2022). Fossil Fuels and Climate Change. In: *Planet in Peril: Humanity's Four Greatest Challenges and How We Can Overcome Them*. Cambridge University Press; 2022:27-35. https://doi.org/10.1017/9781009160315.002

Cohen, S. A. (2015). What Is Stopping the Renewable Energy Transformation and What Can the US Government Do. *Academic Commons, 82(3): 689–710*. https://doi.org/10.7916/D8XG9R8B

Ejaz, U., Khan, S. M., Shah, S. F. A., Khalid, N., Jehangir, S., Rizvi, Z. F., & Svenning, J. C. (2025). Integrative data-driven analytics for assessing ecological and human health risks of soil heavy metal contamination. *Journal of Hazardous Materials Advances, 17: 100596*.

Emberson, L., He, K., Rockström, J., Amann, M., Barron, J., Correll, R., Feresu, S., Haeuber, R., Hicks, K., Johnson, F. X., Karlqvist, A., Klimont, Z., Mylvakanam, I., Song, W. W., Vallack, H. W., Zhang, Q., & Jäger, J. (2012). *Global Energy Assessment (GEA): Energy and Environment* (pp. 191–254). Cambridge University Press. https://doi.org/10.1017/CBO9780511793677.009

Gul, I., Khan, S. M., Nawaz, U., Haq, Z. U., Abdullah, Ahmad, Z., & Iqbal, M. (2022). Techniques used in the process of biodiesel production and its merits and demerits from a historical perspective. In: Nandabalan, Y.K., Garg, V.K., Labhsetwar, N.K., Singh, A. (eds) Zero Waste Biorefinery. Energy, Environment, and Sustainability. Springer, Singapore. Pp. 535-556. https://doi.org/10.1007/978-981-16-8682-5_19

International Energy Agency (2024). *Global Energy and Climate Model Documentation – 2024*. IEA Publications. Website: www.iea.org

Jacobson MZ. (2023). Timeline and Policies Needed to Transition . In: *No Miracles Needed: How Today's Technology Can Save Our Climate and Clean Our Air*. Cambridge University Press eBooks. Pp. 318–340. https://doi.org/10.1017/9781009249553.016

Khan, K. U., Shah, M., Ahmad, H., Khan, S. M., Rahman, I. U., Iqbal, Z., & Aldubise, A. (2018). Exploration and local utilization of medicinal vegetation naturally grown in the Deusai plateau of Gilgit, Pakistan. *Saudi Journal of Biological Sciences, 25(2): 326-331*.

Liu, H.-Y., Skandalos, N., Braslina, L., Kapsalis, V., & Karamanis, D. (2023). Integrating Solar Energy and Nature-Based Solutions for Climate-Neutral Urban Environments. *Solar, 3(3): 382-415*. https://doi.org/10.3390/solar3030022

Manan, F., Khan, S. M., Ahmad, Z., Kamran, S., Haq, Z. U., Abid, F., ... & Abdullah. (2020). Environmental determinants of plant associations and evaluation of the conservation status of Parrotiopsis jacquemontiana in Dir, the Hindu Kush Range of Mountains. *Tropical Ecology, 61: 509-526*.

Michaelides, E. E. (2012). *Environmental and Ecological Effects of Energy Production and Consumption* (pp. 33–63). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-20951-2_2

NOAA (2025). National Oceanic and Atmospheric Administration (NOAA) Global Monitoring Laboratory Trends in CO_2 https://gml.noaa.gov/ccgg/trends/

Obuseh, E., Eyenubo, O. J., Alele, J., Okpare, A., & Oghogho, I. (2025). A Systematic Review of Barriers to Renewable Energy Integration and Adoption. *Journal of Asian Energy Studies, 9: 26–45*. https://doi.org/10.24112/jaes.090002

Ozturk, M., Khan, S. M., Altay, V., Efe, R., Egamberdieva, D., & Khassanov, F. (2022). Biodiversity, conservation and sustainability in Asia: Volume II: prospects and challenges in South and Middle Asia. Springer Nature Switzerland AG, 2021b. DOI, 10, 978-3.

Priatna, D., Baruah. C., & Sharma, D. K. (2023). Better Management Practices (BMP) towards a Human-Wildlife Co-existence. *Asian Journal of Conservation Biology, 12 (2): 177-178*. https://doi.org/10.53562/ajcb.EN00024

Priatna, D., & Khan, S. M. (2024). The importance of education and role of educational institutions in climate change mitigation and achieving UN SDG 13 "Climate Action". *Indonesian Journal of Applied Environmental Studies, 5(1): 1-5*. DOI: 10.33751/injast.v5i1.10559

Priatna, D., & Monk, K. A. (2022). The role of the academic community in combating wildlife trafficking. *Indonesian Journal of Applied Environmental Studies, 3(2): 85-91*. DOI: 10.33751/injast.v3i2.6302

Priatna, D., & Monk, K. A. (2023a). Climate change and its implications on wildlife conservation. *Indonesian Journal of Applied Environmental Studies, 4(2): 64-66*. DOI: 10.33751/injast.v4i2.9661

Priatna, D., & Monk, K. A. (2023b). Progress, Challenges, and the Nexus of Research and Impact - the importance of technology in biodiversity conservation in Indonesia. *Indonesian Journal of Applied Environmental Studies, 4(1): 3-9*. DOI: 10.33751/injast.v4i1.8778

Qamar, A., Ali, S., & Khan, S. M. (2024). Elaborating solutions for bringing sustainability in the air-polluted urban environment via use of plants' anticipated performance and air pollution tolerance indices. *Urban Climate, 58: 102156*.

Rahman, A., Khan, S. M., Ahmad, Z., Alamri, S., Hashem, M., Ilyas, M., & Ali, S. (2021). Impact of multiple environmental factors on species abundance in various forest layers using an integrative modeling approach. *Global Ecology and Conservation, 29: e01712*.

Ramadan, B. S., Budihardjo, M. A., Puspita, A. S., Kurniawan, A., Widiyanti, A., Waskito, A., & Hanaseta, E. (2024). *Successful energy transition—Case study in Indonesia* (pp. 391–408). Elsevier BV. https://doi.org/10.1016/b978-0-443-13607-8.00014-6

Rana, M., Khan, S. M., Ali, S., Khalid, A., & Ahmad, Z. (2024). Carbon credit, trading, green economy, and clean development mechanisms. In: Agroforestry for Carbon and Ecosystem Management (pp. 147-159). Academic Press.

Ratna, T., Shakya, S.R. & Sharma, A. (2022). Energy Transitions : Trend, Drivers, Barriers, and Policies In: M. Asif (ed). Handbook of Energy Transitions. CRC Press eBooks, pp. 21–40. https://doi.org/10.1201/9781003315353-3

Roehrl, R. A. (2016). *Clean energy for sustainable development*. Pp. 81–113. https://doi.org/10.18356/7B9BB2C1-EN

Ross, K. E., & Piketh, S. (2005). The Implications of Fossil Fuel Combustion for Climate Change. *MRS Proceedings, 885(1): 1–12*. https://doi.org/10.1557/PROC-0885-A01-01

Soeder, D. J. (2021). *Fossil Fuels and Climate Change* (pp. 155–185). Springer, Cham. https://doi.org/10.1007/978-3-030-59121-2_9

Stein, A. L. (2017). Breaking Energy Path Dependencies. *Brooklyn Law Review, 82(2): 559*. https://scholarship.law.ufl.edu/cgi/viewcontent.cgi?article=1804&context=facultypub

Teixidor-Toneu, I., Mattalia, G., Caillon, S., Abdullah, A., Fiser, Ž., Karlsen, P., Khan S. M., & Schunko, C. (2025). Stewardship underpins sustainable foraging. *Trends in Ecology & Evolution. 40(4): 315-319*. https://doi.org/10.1016/j.tree.2025.01.00

Ullah, T., Khan, S. M., Abdullah, A., Sulaiman, N., Ullah, A., Khan, M. S., & Pieroni, A. (2024). Bio-Cultural Diversity for Food Security: Traditional Wild Food Plants and Their Folk Cuisine in Lakki Marwat, Northwestern Pakistan. *Diversity, 16(11): 684*.

Yudiartono, Y., Santosa, J., Fitriana, I., Wijaya, P. T., Rahardjo, I., Wahid, L. O. M. A., Siregar, E. M., Hesty, N. W., Fithri, S. R., & Sugiyono, A. (2024). Renewable energy in sustainable cities: Challenges and opportunities by the case study of Nusantara Capital City (IKN). *International Journal of Renewable Energy Development, 13(6), 1136–1148*. https://doi.org/10.61435/ijred.2024.60390

Zaręba, A., Krzemińska, A., & Łach, J. (2017). Energy sustainable cities. From eco villages, eco districts towards zero carbon cities. *E3S Web of Conferences, 22: 00199*. https://doi.org/10.1051/E3SCONF/20172200199