

Editor's Foreword

Dear Scholars, Researchers, Policymakers, Practitioners, and Esteemed Readers,

The transition to a low-carbon future is one of the defining undertakings of our time. Climate change, ecosystem degradation, pollution, resource depletion, and uneven patterns of development are no longer isolated environmental concerns. They interact with energy security, public health, food and water systems, industrial competitiveness, urbanization, and social equity. Decisions made today about infrastructure, technology, land, and institutions will shape environmental conditions and development pathways for decades to come.

The scale of this challenge requires urgency, but urgency must be accompanied by evidence. Ambitious targets are meaningful only when they can be translated into credible policies, measurable outcomes, workable technologies, and fair implementation. Solutions must be assessed across their full life cycles and across connected systems. A technology that reduces emissions at one stage may transfer impacts elsewhere; a policy that is efficient in aggregate may impose disproportionate burdens on particular communities; and a strategy successful in one region may depend on resources or institutions unavailable in another. Progress therefore depends on research capable of integrating environmental science, engineering, economics, governance, and social understanding.

It is with this conviction that we launch *Low Carbon and Environment* (LCE), an international, peer-reviewed, open-access journal dedicated to low-carbon development, environmental protection, and sustainable resource management. LCE seeks to connect scientific understanding with technological innovation and policy action. We aim to provide a forum in which researchers, policymakers, industry professionals, and community practitioners can examine environmental problems rigorously, test solutions transparently, and learn across disciplinary and geographical boundaries.

The journal's scope includes climate-change mitigation and adaptation, renewable and sustainable energy systems, energy efficiency, industrial decarbonization, low-carbon cities and transport, carbon capture and utilization, greenhouse-gas accounting, environmental monitoring, pollution prevention and control, circular economy, waste and resource management, ecological conservation and restoration, sustainable agriculture, water and soil protection, environmental health, green finance, and environmental policy and governance. We welcome work that studies individual technologies as well as research that evaluates interactions among energy, materials, ecosystems, economies, and communities.

LCE particularly encourages interdisciplinary studies that move beyond narrow optimization. The low-carbon transition involves technical feasibility, economic cost, institutional capacity, public acceptance, and distributive consequences. We therefore welcome life-cycle assessment, systems modeling, field experiments, policy evaluation, scenario analysis, comparative studies, and participatory approaches. Contributions may focus on local interventions or global processes, but they should explain clearly how evidence was produced, what assumptions underlie the analysis, and where the findings can reasonably be applied.

Our editorial work will be guided by four commitments. The first is scientific integrity. Environmental decisions must rest on transparent data, appropriate methods, and conclusions proportionate to the evidence. The second is systems thinking. We encourage authors to examine trade-offs, rebound effects, cross-sector linkages, and unintended

consequences. The third is practical relevance. Research should clarify how knowledge can inform design, management, policy, or public understanding without sacrificing scholarly independence. The fourth is fairness. A durable transition must consider livelihoods, regional disparities, intergenerational responsibility, and the participation of communities affected by environmental change.

We also seek to strengthen the bridge between innovation and implementation. Promising materials, processes, and models often face barriers when moved from laboratory or pilot scale into complex real-world settings. These barriers may include cost, maintenance, supply chains, regulatory uncertainty, data limitations, or social resistance. LCE welcomes careful studies of scale-up, deployment, and institutional learning. We value research that identifies why interventions succeed or fail and that reports limitations as seriously as achievements.

Open access is central to this mission. Environmental challenges are shared, while access to scientific resources remains unequal. By making research available to readers across regions and sectors, we hope to support wider scrutiny, faster learning, and more inclusive participation in environmental problem-solving. Openness also carries responsibilities: authors should document methods and data as fully as possible, reviewers should engage critically and constructively, and the journal should maintain clear standards that protect the credibility of the published record.

We warmly invite contributions from environmental scientists, engineers, economists, social scientists, public-health researchers, planners, policymakers, and practitioners. We welcome original research, authoritative reviews, methodological advances, policy analyses, and case studies that offer lessons beyond a single project. Early-career researchers and scholars from regions most affected by environmental change are especially encouraged to bring forward their evidence and perspectives.

The establishment of LCE reflects a belief that knowledge can help societies move from aspiration to accountable action. No journal can resolve the environmental crisis by itself, but a journal can create a disciplined space in which claims are tested, experiences are compared, and better choices become possible. With this inaugural issue, we invite the global community to join us in building such a space. May LCE contribute to a transition that is not only lower in carbon, but also more resilient, responsible, and just.

Low Carbon and Environment (LCE)
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