The 25th Science Council of Asia Conference

"Sustainable Technologies and Digital Transformation for a Resilient Future"
19–20 November 2026, Siem Reap, Kingdom of Cambodia

DECLARATION

Asia is confronting a defining combination of climate change, air pollution and ecological degradation, rapid technological change, resource constraints, public health risks, and widening social inequalities. The region therefore faces a double imperative: to accelerate sustainable development while ensuring that digital transformation strengthens resilience, inclusion, and human well-being. Sustainable technologies, together with artificial intelligence, the Internet of Things, big data, digital monitoring systems, advanced materials, and renewable energy, offer opportunities to improve resource efficiency, protect environmental and human health, strengthen evidence-based decision-making, and support low-carbon development. Technological progress alone, however, cannot guarantee a resilient or equitable future.

Recognizing this responsibility, the Science Council of Asia (SCA) chose "Sustainable Technologies and Digital Transformation for a Resilient Future" as the theme of the 25th SCA Conference (25th SCAC). Co-hosted by the SCA and the Institute of Technology of Cambodia (ITC), the Conference was convened in Siem Reap, Kingdom of Cambodia, on 19–20 November 2026. It welcomed approximately 150 participants (on-site and online) from more than 35 institutions in at least 18 countries and regions: 15 in Asia and 3 from outside Asia, with some participants joining online. Scientists, academicians, policymakers, practitioners, industry representatives, community stakeholders, and young researchers came together to look at emerging challenges and to find practical, policy-relevant ways of linking scientific innovation with environmental and social well-being. Over two days, keynote addresses, multidisciplinary parallel sessions, the Future Earth Symposium, and the Integrated Cross-Session encouraged open exchange across technological, environmental, social, ethical, and policy perspectives.

This Declaration builds on the preceding SCA Conference declarations: the 21st, which called for open, human-centric digital transformation and science-based policy; the 22nd, which recognized that science and technology are a double-edged sword and called for norms governing data and AI; the 23rd, which placed equity and social justice at the center of the Fourth Industrial

Revolution; and the 24th, which committed Asia to resilient food systems and the safeguarding of biodiversity.

Drawing on the scientific contributions and deliberations of the Conference, the SCA hereby issues this Declaration, outlining strategic directions to guide collective efforts toward a sustainable, digitally enabled, inclusive, and resilient Asia.

1. Advancing Sustainable Technologies for Low-Carbon and Resource-Efficient Development

We call for accelerated research, development, and deployment of renewable and low-carbon energy, energy efficiency, smart grids and demand-side management, sustainable industrial processes, and green, smart, and functional materials. We encourage circular economy approaches, resource-efficient production, waste valorization, and locally appropriate technological solutions that reduce pollution and emissions. Technology choices must be evaluated for their full life-cycle environmental impacts and prioritized for their appropriateness to the diverse economic, technological, and ecological settings of Asian countries, supported by fair access to finance, technology transfer, and technical capacity.

2. Ensuring Responsible, Ethical, and Secure Digital Transformation

Artificial intelligence, the Internet of Things, big data, and other digital technologies must be developed and applied to serve people and the planet. We urge governments, academies, industry, and civil society to establish governance frameworks grounded in transparency, accountability, privacy, human oversight, and cybersecurity. Beyond these measures, the potential risks of increasing reliance on AI and data, including those that may exceed current human oversight and security capabilities, must be scientifically assessed. Risk assessment and mitigation should advance alongside digital transformation, with the understanding and participation of industry and society. We encourage accessible, reliable, and interoperable data systems that support scientific monitoring, environmental management, public services, and evidence-based decision-making. Ethical considerations must be integral to how technologies are designed, tested, and deployed, alongside careful assessment of the energy and resource footprint of digital infrastructure itself.

3. Placing Inclusion, Equity, and Gender-Responsive Innovation at the Center

Digital transformation must narrow, not widen, the gaps between and within societies. We commit to promoting digital inclusion and equitable access to technologies, skills, data, and knowledge, with particular attention to women, youth, persons with disabilities, smallholders, rural and remote communities, indigenous peoples, and other vulnerable groups. Innovation should be gender-responsive, accessible, affordable, and sensitive to social and cultural contexts. Inclusive education, assistive technologies, and opportunities for participation across generations should be strengthened, drawing on Asia's traditional knowledge and heritage alongside modern science.

4. Building Resilience in Air, Water, Food, Health, and Communities

We call for integrated approaches to strengthening resilience in air quality, water resources, food systems, public health, and local communities. Particular attention should be given to the monitoring and mitigation of indoor and outdoor air pollution, including particulate matter, black carbon, biomass-burning emissions, microplastics, and emerging environmental contaminants, through reliable observations, advanced modelling, and evidence-based policies. We encourage the application of sustainable technologies in climate-resilient agriculture, food processing, nutrition and food safety, equitable water access, wastewater treatment, and circular water management. Recognizing the interconnectedness of human, animal, and environmental health, we support integrated One Health approaches to disease prevention, antimicrobial resistance surveillance, and environmental risk management. Community participation, local ownership, and equitable access to essential services are critical to lasting resilience, alongside continued attention to food security and biodiversity as emphasized by the 24th SCA Conference.

5. Strengthening the Science-Policy-Society Interface, Education, and Capacity Building

Robust, cross-disciplinary science, including the social sciences and humanities, should inform policy, planning, and investment for sustainability and digital transformation. The Conference's interdisciplinary program, including the Future Earth Symposium and the Integrated Cross-Session, underscores the importance of bridging science, society, and sustainability. We call on science academies and institutions to promote open science, foresight, evidence-based policy advice, education, and digital skills development, including meaningful engagement of women and young researchers. Universities and research institutions should strengthen mechanisms for translating scientific findings into actionable policies, professional capacity development, and practical innovation, supported by dialogue across disciplines, institutions, and generations.

6. Deepening Regional and Global Collaboration

No country or institution can address these challenges alone. We stress the importance of cross-border research networks, shared scientific data and infrastructure, joint pilot projects, and the exchange of good practices, facilitated through the SCA network and its member organizations. We particularly encourage regional cooperation in addressing transboundary environmental challenges through harmonized monitoring systems, joint research, data exchange, and coordinated capacity-building initiatives. Partnerships with international bodies, governments, development partners, industry, and communities should be strengthened to advance the Sustainable Development Goals and ensure that Asia's experience, including that of Cambodia and other emerging economies, contributes to global solutions adapted to national and local contexts.

Resolution

We, the participants of the 25th Science Council of Asia Conference, reaffirm our shared conviction that sustainable technologies and digital transformation can contribute to a resilient future for Asia when guided by sound science, ethical principles, social inclusion, and regional cooperation.

We encourage the SCA and its member organizations to strengthen collaborative research, facilitate the sharing of scientific knowledge and technological expertise, promote inclusive capacity building, and support the translation of research findings into practical solutions and evidence-based policies. Recognizing the interconnected challenges of climate change, environmental pollution, resource sustainability, public health, and social inequality, we call for continued cooperation among science academies, universities, governments, industry, and civil society to advance sustainable development for present and future generations.

We express our sincere appreciation to the conference organizers, the Institute of Technology of Cambodia, and the people of Cambodia for their contributions and warm hospitality in hosting the 25th SCA Conference in Siem Reap.