
SCIENCE FOR ACTION IN SUSTAINABLE DEVELOPMENT

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Science provides the foundations of today's world. The discovery of our planetary system, antibiotics and the internet and artificial intelligence are all scientific breakthroughs that have transformed the way we live our lives and shaped how important public decisions are made.

Science is not just about discovery. Whilst it helps us to understand our world, it can also act as a powerful unifying source, accelerating innovation and transforming our economy and society to build a better world and more sustainable future. The Montreal Protocol, which saw all of the countries of the world come together to ban the use of ozone-harming substances, was driven by scientific discovery.

Within the United Nations the role of science as a unifying platform for political negotiation to address global and systemic challenges is well recognized, through entities like the Intergovernmental Panel on Climate Change (IPCC) and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). The IPCC is the United Nations' body to assess the science relating to climate change. It is the IPCC's reports that informed negotiations that led to the Paris Agreement. Reports such as these provide the latest knowledge to the international community to help address systemic issues and identify transformative solutions for coordinated action at the local, national and global levels (such as pandemics, climate, urbanisation, food security, biodiversity loss, and water security).

The world is divided by political mistrust. Conflict and insecurity are undermining global cooperation and slowing our progress towards a common, sustainable future. But we firmly believe that 2024 presents a new opportunity and with strong scientific underpinnings we may yet find a way through.

At the most recent UN General Assembly (the 77th Session), UN Members agreed to design and implement transformative solutions to guarantee food and education for all, improve human development, secure a healthy environment and embark on a path towards a less unjust global society. Transformative solutions are particularly needed to respond to the multiple related crises of the Anthropocene such as biodiversity loss and mass urbanisation. These solutions need to help us reach the Sustainable Development Goals and enable a decent life for all, whilst preserving nature and securing circular human economies. They must leverage the synergies and address the many barriers and externalities that have so far hampered sustainable development. Difficult decisions will be needed as priority actions are identified and finances mobilized, based on the evidence and framed by the concept of going beyond Gross Domestic Product as the only measure of economic reason and success.

Leaders of the UN are committed to working with scientists to identify transformative solutions and to put them before Member States, helping to drive unity and progress for all. In support of this, I would like to invite researchers and academics the world over to come forward with policy-relevant research on systemic solutions to underpin global decision-making. Your research needs to be cross-sectoral, encouraging collaboration across domains, sectors and ministries, focused on missions to promote an equitable and sustainable future. I particularly urge you to consider the following 6 questions which will be central to discussions in the UNGA, in the years ahead:

1. How can we secure food for all, increase carbon uptake in natural ecosystems and reduce water dependency at the same time?
2. How can we guarantee affordable, sustainable health and wellbeing without consuming more natural resources?
3. How can we restore and protect the water cycle to improve human and ecosystem health, mitigate and adapt to climate change and make our economy more resilient to shocks?
4. How do we design and implement an affordable climate and natural resource smart energy provision system?
5. How do we manage urbanisation; build and retrofit safe, resilient and sustainable cities and communities to end poverty, prioritize equity, human well-being and ecological health?
6. How do we steer away from dangerous extractive business models with the help amending the concept of Gross Domestic Product to include social and environmental sustainability?

There are many pathways to engage your research with policy and action; by identifying national science-policy dialogues in advance of large-scale Member State events like the Summit of the Future in 2024; by joining academic networks like the International Science Council and UN Sustainable Development Solutions Network which actively engage with the UN system; or by liaising with the Group of Friends of Science for Action in the UN in New York.

As the complexity of the world increases it is only right that global politicians and policymakers should hear and learn from the world's leading scientists and innovators. In September 2023, world leading institutions are discussing to support policy development through key descriptors of sustainability. These descriptors integrate indicators across the 17 SDGs, provide real time information products on economy, environment and social development and highlight the trends that we can use to correct policy and financing for sustainable development.

Whether you are a social, environmental or physical scientist; a humanist or an engineer, a citizen or politician, join us in using science to help build pathways to a unified, sustainable future.

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President of the 77th session of the UN General Assembly

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