Progress of Scientific Cooperation Under BRICS

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Overall, BRICS scientific cooperation aims to tackle global challenges like climate change, energy efficiency, water treatment, and food security, improving quality of life using STI. In its Presidency, India aims to further strengthen scientific cooperation and introduce BRICS Science & Research Repository. S. K. Varshney writes.

India has just taken over the BRICS Presidency once again. The presidency has been revolving in BRICS member countries. A concept, initiated as BRIC (Brazil, Russia, India and China), started in 2001 as a consortium of emerging economies. Subsequently, South Africa joined in 2010 to make it BRICS. Today, it has 10 full members. Though it started to foster economic, financial and political cooperation amongst its members, the group aimed to create a more balanced multipolar world order. With passage of time, it changed focus from primarily economic discussions to broader geopolitical issues, including global governance reform, sustainable development, and increased South-South cooperation.

Scientific cooperation under BRICS grew once sustainable development was added as an agenda. Initially, in 2011, cooperation encouraged joint research in digital technology, energy, agriculture, biotechnology, health for sustainable development, which eventually grew to the setting up of thematic research groups.

Currently, BRICS Science, Technology, and Innovation (STI) cooperation fosters research, development, and tech transfer among member countries (Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Iran, UAE) through working groups (e.g., on energy, health, space), joint calls of research and development projects, and platforms like the Young Scientists Forum, aiming to tackle shared challenges like climate change, food security, and energy, leveraging collective strengths in areas from biotech to Artificial Intelligence and big data. In addition, over a dozen thematic groups focus on specific areas like Nanotechnology, High-Performance Computing, Space, Astronomy, Renewable Energy, Food Security, and Biotechnology.

Overall, goals of BRICS scientific partnership has been to co-generate new knowledge and innovative solutions, address socio-economic challenges (climate, health, food) and to promote shared learning and technological advancement. BRICS has established a STI Framework Programme platform for joint innovation projects. Under this platform, researchers from at least 3 BRICS member countries may initiate a project. A digital platform, iBRICS network has been designed to connect innovators and innovation ecosystems across member states.

Each year, the country holding the BRICS Presidency decides the themes for young scientists meeting and innovators meeting. 30-40 participants from each member country make the presentations and a panel of judges (from various member countries) decides the winners, keeping in mind the novelty of ideas, value addition by the individuals and its usefulness to the society. This helps young researchers in understanding various global challenges and connecting to their peers to develop new networking and look for common solutions to a given challenge.

BRICS science, technology, and innovation (STI) future goals focus on deepening collaboration through joint research in key areas like AI, health, and clean energy, commercializing innovations via the STI Framework Programme, fostering start up ecosystems, and building capacity for sustainable development, with a new action plan (2025-2030) emphasizing data sharing, policy alignment, and tech transfer to create inclusive, innovation-driven growth.

Key Future Goals & Initiatives

BRICS STI Framework (2025) supports collaborative R&D, technology maturation, and business model development for market deployment, aiming to commercialize innovations. On scientific advances, it focuses on expanding cooperation in artificial intelligence, biotechnology, space, new & renewable energy, materials science (nanotechnology), High-Performance Computing (HPC), and digital technologies. Huge emphasis has been laid on human capacity building through scientific exchanges, training, and shared research infrastructure.

A BRICS Start up Forum has been established to promote cross-border exchange, knowledge sharing, and entrepreneurship to address SDGs and create jobs. Simultaneously, there is an Action Plan aimed for 2025-2030 to share best practices, map alliances, create STI data banks, and establish ICT platforms for knowledge exchange.

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