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India's G20 Presidency

G20 Research and Innovation Initiative Gathering (RIIG)

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“Innovation must not be just the goal of our science. Innovation must also drive the scientific process.”

- Prime Minister Narendra Modi

Research and Innovation Initiative Gathering (RIIG) aims to enhance, intensify, and strengthen research and innovation collaboration among the G20 member countries. It reflects the government's focus on designing frameworks that generate new markets and sustain macroeconomic growth, enabling the research and innovation ecosystem. RIIG is furthering the work of the Academic Forum held during the Italian Presidency in 2021, by bringing together science, technology, and innovation experts of the G20 member countries.¹

RIIG aims to address the challenges of achieving socioeconomic equity through research and innovation. It proposes the establishment of a G20 Working Group on Research, Innovation, and Equity, which would bring together leading economic powers to address these challenges. The goal is to promote international scientific cooperation and develop sustainable solutions for science-driven equity, by sharing best practices, collaborating on research projects, and developing policies to promote equitable access to the benefits of research and innovation.²

Within the broad theme "**Research and Innovation for Equitable Society**" for RIIG 2023, the deliberations focus on four priority areas –

- ◆ Materials for Sustainable Energy;
- ◆ Circular-bio-economy;
- ◆ Eco-Innovations for Energy Transition;
- ◆ Scientific Challenges and Opportunities towards Achieving a Sustainable Blue Economy.³

¹<https://www.g20.org/en/workstreams/sherpa-track/>

²https://moes.gov.in/g20-india-2023/riig?language_content_entity=en

³<https://pib.gov.in/PressReleaseDetail.aspx?PRID=1897776>

RIIG INCEPTION MEET

Kolkata, West Bengal |February 8-9, 2023⁴

The Inception meeting of RIIG kicked off in Kolkata, bringing together scientists & administrators from different areas together to discuss research and innovation for an equitable society. A total of 36 foreign delegates representing 20 countries and International Organisations, namely Argentina, Australia, Brazil, Canada, European Union, France, Germany, Indonesia, International Solar Alliance (ISA), Italy, Netherlands, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Turkiye, UAE, United Kingdom, and the United States of America – participated in the Inception meeting. About 40 Indian delegates and special invitees from various scientific departments/ organisations of the Government of India participated in the meeting.



Dr. S Chandrasekhar, Secretary Department of Science and Technology (DST), said that G20 has the greatest footprint and impact on growth, economy, and sustainability through international cooperation, stressing the responsibility of the group to drive change and drive it now.

Dr. Kiran Kumar, Former Secretary, Department of Space and member Space Commission delivered the keynote address and remarked, “Human development is a continuous process, and intellectual capabilities are growing with each passing day. Research and Innovation bring new opportunities, and we need to see how the new technologies could be helpful for society”.

Dr N. Kalaiselvi, Secretary Department of Scientific & Industrial Research (DSIR), and DG, CSIR stressed that as a global community, the G20 requires a huge expansion of manufacturing of renewable energy appliances, and needs to augment manufacturing by 10 to 15 times. She expressed the necessity of partnership among G20 countries in the areas of energy generation, conversion, and storage, particularly on the production of green hydrogen and green ammonia, end-to-end production of energy storage devices, and supply chain management.

Dr. Rajesh Gokhale, Secretary, Department of Biotechnology (DBT), introduced the second priority area of circular bio-economy. Dr. Gokhale emphasised India’s “Mission LIFE” -“Life Style for Environment” launched by Prime Minister Narendra Modi envisions replacing the prevalent ‘use-and-dispose’ economy with a circular economy defined by mindful and deliberate utilisation. He also highlighted that India is developing a policy framework for high-

⁴<https://pib.gov.in/PressReleaseDetail.aspx?PRID=1897776>

performance bio-manufacturing that will foster world-class expertise, facilities, and a skilled workforce in synthetic biology-based sustainable manufacturing practices for green India.

Secretary, Ministry of Earth Sciences **Dr. M Ravichandran** elaborated on scientific challenges and opportunities to achieve a sustainable blue economy, ensure sustainable and equitable utilisation of marine living resources, and enhance blue carbon capacity to counter climate change.

Dr. Akhilesh Gupta, Secretary, Science and Engineering Research Board, introduced the third priority area, Eco-Innovations for Energy Transition. Dr. Gupta highlighted the global energy scenario and India's commitment towards attaining climate goals through the sustainable energy transition. Research and Innovation initiatives in the areas such as Carbon capture, utilisation, and storage, hydrogen economy, and R&D in electric vehicles were highlighted as key drivers of the energy transition.



RIIG EVENT (CSIR)

Ranchi, Jharkhand | March 2-3, 2023⁵

The second RIIG event was held in Ranchi, Jharkhand on March 2-3, 2023. The conference discussed mechanisms to collaborate and work for sustainable energy technologies. A total of 21 foreign delegates from 16 G20 member countries, guest countries and international organisations participated in the conference along with about 40 Indian experts. The Council of Scientific and Industrial Research (CSIR), New Delhi coordinated the Conference.

⁵<https://pib.gov.in/PressReleaseDetail.aspx?PRID=1903985>



Delegates deliberated on ways of working jointly to solve the energy challenges collectively to achieve carbon emission net-zero goals for environmental protection and sustainability at the G20 Conference on Materials for Sustainable Energy.

Various facets of ‘Materials for Sustainable Energy’ were discussed under three sessions –

- 21st-century challenges related to energy materials & devices;
- Solar energy utilisation and photovoltaic technology;
- Materials and processes for green energy.



Dr. S. Chandrasekhar, Secretary, Department of Science and Technology (DST) and RIIG Chair, said that many G20 nations, including India, have enormous minerals and materials wealth that is required to be sustainably used for meeting our energy requirements.

Highlighting the theme of the G20 under India’s Presidency, “Vasudhaiva Kutumbakam” or “One Earth, One Family, One Future” Dr. N. Kalaiselvi, Secretary, DSIR and DG, CSIR said it underlines the need for the entire world to come together and focus on sustainable energy so that we can have one global future with net zero emissions.

As G20 delegates from Indonesia and Brazil, the other two troika countries reiterated the importance of the conference, delegates from several countries called upon the G20 nations to join hands for furthering research and developing technological solutions in sustainable energy storage, distribution and management.

Post the RIIG Conference, the delegates stepped out for an exciting day of excursion in Ranchi. From exploring the local delicacies to shopping for authentic trinkets from the stalls, the foreign delegates praised for the warm hospitality of Jharkhand.⁶

⁶<https://twitter.com/g20org/status/1631639824107991040>



RIIG EVENT

Dibrugarh, Assam | March 23-24, 2023⁷

The third RIIG Conference was held on March 23-24, 2023 at Dibrugarh, Assam. Delegates deliberated on building a sustainable and circular bio-economy. The G20 RIIG Conference is coordinated by the Department of Biotechnology, Ministry of Science & Technology, Government of India. Delegates from G20 members, guest countries, and International Organizations, and invited participants from the scientific community deliberated on the ways towards building a sustainable and circular bio-economy. About 100 delegates and invitees participated in the conference.



In his inaugural speech as the Chair of the G20 Research and Innovation Initiative conference, Dr. S Chandrasekhar, Secretary, Department of Science and Technology said that integration of circular economy and bio-economy is necessary for sustainable economic growth. He added that circular economy and bio-economy are interrelated and instead of looking at them as separate entities, we should aim for mutually beneficial complementary collaboration between them.

⁷<https://pib.gov.in/PressReleaseDetail.aspx?PRID=1909496>



The event brought together key actors, comprising national authorities and experts from the G20 members responsible for planning, setting up new, and managing existing programs on the subject. The focus areas included challenges and opportunities in agriculture, de-carbonization of industry, and bio-energy and

bio-resource management. The conference also saw deliberations on national and regional programs and country experiences, regulatory environment and public/private sector collaboration, the role of Research, Development & Innovation in creating new, resource-efficient, sustainable, and more circular bio-based technologies, products and services, and cooperation between G20 members on specific thematic areas.

On March 25, 2023, the RIIG Meeting delegates visited Itanagar, Arunachal Pradesh. On their arrival in Itanagar, the delegates witnessed an exhibition on various tribal cultures, arts and innovations of the budding innovators of the State. The exhibition was formally inaugurated by the Chief Minister of Arunachal Pradesh, Shri Pema Khandu.

Young innovators from Arunachal Pradesh also exhibited their innovations to the Research and Innovation Initiative Gathering (RIIG) Conference delegates visiting Itanagar at the State Banquet Hall.⁸



Various items made from cane & bamboo were on display at RIIG at the Handicrafts and Handlooms Exhibition in Itanagar's GJ Banquet Hall.⁹ Delegates also witnessed the cultural programme of various tribes of Arunachal Pradesh.¹⁰

⁸[https://twitter.com/search?q=RIIG%20\(from%3A%40airnewsalerts\)&src=typed_query&f=top](https://twitter.com/search?q=RIIG%20(from%3A%40airnewsalerts)&src=typed_query&f=top)

⁹<https://twitter.com/DDNewsLive/status/1639820443782619137>

¹⁰<https://twitter.com/airnewsalerts/status/1639537043872133126>



RIIG EVENT ON ECO-INNOVATIONS FOR ENERGY TRANSITION

Dharamshala, Himachal Pradesh | April 19 - 20, 2023

On the first day of the two-day G20 conference on the "Research Innovation and Initiatives Gathering (RIIG) on eco-innovations for energy transition" in Dharamshala on April 19, 2023, deliberations were held on sharing best practices and policy models of G20 countries for sustainable energy transition. Secretary of the Department of Science and Technology, Dr. Srivari Chandrasekhar presided over the meeting.



Speaking on the occasion, Dr. Chandrasekhar called for prioritizing the transition from fossil fuel consumption. He stated that the potential for harnessing renewable energies is great enough to meet requirements but capturing, converting, and storing them on a large scale requires a monumental effort which can be accomplished by working together.

29 foreign delegates and 30 Indian experts and invitees from various scientific departments/organisations of the Government of India participated in the conference. The discussions were based on topics –

- Smart energy transformation, storage, and management;
- Mission-driven research in sustainable energy transitions;
- Policy frameworks for research and innovation in carbon-neutral energy sources; and
- Green hydrogen and cooperation among G20 members on specific thematic areas.

Meanwhile, the stalls of handicrafts and handlooms showcasing Himachali handicrafts and handloom products attracted the attention of the foreign delegates. Chamba Thal, Chamba Rumal, and Chamba Chappal along with various Himachali costumes were highly appreciated by the delegates.¹¹

RIIG CONFERENCE ON SCIENTIFIC CHALLENGES AND OPPORTUNITIES FOR A SUSTAINABLE BLUE ECONOMY

Diu | May 18, 2023

The G20 Research Innovation and Initiative Gathering (RIIG) Conference on Scientific Challenges and Opportunities for a Sustainable Blue Economy, was held at Diu on May 18, 2023. A total of 35 foreign delegates and 40 Indian experts and invitees from various scientific

¹¹ <https://newsonair.gov.in/News?title=Research-and-Innovation-Initiative-Gathering-conference-of-G-20-to-begin-in-Himachal-Pradesh-today&id=459573>



departments/ organisations of Govt of India, participated in the conference. The meeting was chaired by Dr. Srivari Chandrasekhar, Secretary DST who is also G20 RIIG-Chair.¹²

Dr Srivari Chandrasekhar, Secretary DST, and G20 RIIG - Chair welcomed the delegates to the meeting. Dr Chandrasekhar in his opening remarks said India has a multi-pronged plan for coastal area development comprising transforming the blue economy, improvement of coastal infrastructure, and protecting the marine ecosystem.

The discussions of the conference were primarily focused on topics –

- Understanding the Blue Economy Science & Services;
- Blue Economy Sectors and Opportunities;
- Observation Data and Information Services;
- Marine Ecosystems & Pollution;
- Blue Economy Management and Perspectives;
- Coastal and Marine Spatial Planning;
- Marine Living Resources and Biodiversity;
- Deep Sea Ocean Technology; and
- Blue Economy Policy Perspectives.

India also presented the first draft of the Research Ministers' Declaration for discussion during the meeting. The Ministerial Declaration shall be adopted at the Research Ministers meeting scheduled to take place in Mumbai on July 5, 2023.¹³

RIIG SUMMIT ON RESEARCH & INNOVATION FOR AN EQUITABLE SOCIETY

Mumbai | July 04 - 06, 2023

¹² <https://pib.gov.in/PressReleasePage.aspx?PRID=1925301>

¹³ <https://pib.gov.in/PressReleasePage.aspx?PRID=1925301>

The Secretary, Department of Science and Technology, Dr. Srivari Chandrasekhar welcomed delegates at the G20 Research and Innovation Initiative (RIIG) Summit which started off in Mumbai on July 4, 2023. Recognising the significant role of research, development, and innovation in growth and development, Dr. Chandrasekhar highlighted the constructive participation of all G-20 member countries in the drafting of the Ministerial Declaration of the G20 science engagements.



India has taken forward the Research and Innovation Initiative (RIIG) during its Presidency in 2023 under the theme “**Research and Innovation for Equitable Society**”. A total of 5 RIIG meetings/conferences have been hosted by India during 2023 under this theme.

The meeting discussed and negotiated the draft Outcome Document at the RIIG Summit. It marked the culmination of the G20 science engagements that took place through a series of meetings in different parts of India during India’s G20 Presidency in 2023.

[Research Ministers’ Meeting](#)

The G20 Research and Innovation Ministerial Meeting, chaired by Union Minister of State (Independent Charge) for Science and Technology, Dr. Jitendra Singh was held in Mumbai from July 5 - 6, 2023. The Research Ministers of the G20 members and invitee countries, while endorsing and supporting the four priority discussion areas identified by India’s Presidency for Research and Innovation Initiative Gathering (RIIG), re-affirmed the critical role of research and innovation for enabling inclusive and sustainable development and resolved to support all efforts for transforming research and innovation systems to respond to the changing world of the 21st century and address the challenges of tomorrow.

In his inaugural address, the Union Minister of State (Independent Charge) for Science and Technology, Dr. Jitendra Singh highlighted that Scientists and Researchers have been at the forefront of cutting-edge discoveries and advancements across multiple disciplines like space exploration to artificial intelligence, from biotechnology to nanotechnology and have pushed the boundaries of scientific understanding and have fostered innovation that benefits humanity as a whole.

While recognising the importance of adoption of initiatives that promote lifestyles for sustainable development such as India's LiFE initiative, the G20 Research Ministers expressed commitment to achieving a resilient, inclusive, and sustainable future. They also reaffirmed their commitment to open, equitable and secure scientific collaboration in the identified priority areas for developing solutions that address societal and global challenges.



The RIIG Meetings during India's G20 Presidency provided a platform for stakeholders from the Research and Innovation sector to share ideas and create new partnerships for achieving socio-economic equity. All G20 Research Ministers unanimously agreed to recommend the elevation of the Research and Innovation Initiative Gathering (RIIG) to the status of a formal Working Group, i.e., G20 Research and Innovation Working Group (RIWG) under the Sherpa Track.



Based on the engagements and discussions on the priority areas— *Materials for Sustainable Energy; Circular Bio-Economy; Eco-Innovations for Energy Transition; and Sustainable Blue Economy*, which took place through a series of meetings under the broad theme of '**Research and Innovation for an Equitable Society**', an "[Outcome Document and Chair's Summary](#)" was issued after the meeting.

On the last day of the meeting i.e., July 6, 2023, G20 delegates attending the RIIG Summit and Research Ministers' Meeting visited IIT Bombay to see the research and innovation facilities at IIT Bombay.



References:

- [RIIG](#)
- [PIB Press Release Kolkata Meet](#)
- [PIB Press Release Ranchi Meet](#)
- [PIB Press Release Dibrugarh Meet](#)
- [PIB Press Release Dharamshala Meet](#)
- [PIB Press Release Diu Meet](#)
- [RIIG MOES](#)
- [G20 member countries discuss Research Ministerial Declaration at the RIIG Summit today](#)
- [G20 Research Ministers resolve to transform research and innovation systems to address the challenges of tomorrow](#)
- [Union Minister Dr Jitendra Singh asks G20 countries to “rise above differences” and address the global challenges confronting the world and act as G20 member responsive for global well-being in the spirit of one family](#)

Twitter Links:

- <https://twitter.com/g20org/status/1639179111712321539>
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