



# CSIR, India: An Innovation Hub for Global Sustainable Development



Science Summit at the 78 United Nation General Assembly (SSUNGA78)

## CSIR's Science Sessions

### “CSIR, India: An Innovation Hub for Global Sustainable Development”

Science Summit at the 78 United Nation General Assembly

Date: 22 and 28 September 2023; Time: 1630 hrs to 1900 hrs (IST)

#### About the Organization: Council of Scientific and Industrial Research (CSIR), India

Council of Scientific & Industrial Research (CSIR), India, is the largest industrial R&D organization in India, under the Department of Scientific and Industrial Research (DSIR) of Ministry of Science and Technology, Government of India. CSIR, established in 1942 has 37 multidisciplinary R&D institutes located across India that are working in a wide spectrum of S&T fields from oceanography, geophysics, chemicals, drugs, genomics, biotechnology and nanotechnology to mining, aeronautics, instrumentation, environmental engineering and information technology. SCIMAGO Institutions Rankings 2022 has ranked CSIR, India **39th among 1745 Government institutions worldwide** with a “**Research**” rank of **186 among the 8084 ranked institutions globally**. CSIR, India lies in the 4th percentile in Research ratings among with World institutions and lies in the **2nd percentile in Research rating among the institutions in Asiatic region**.

The Network of laboratories are being manned by about 9000 highly skilled S&T manpower. Its need-based and industry-focused R&D and technology development, strength in basic and applied research, and the world-class R&D infrastructure have contributed immensely to India's prowess in S&T as measured by patents, publications and innovations.

CSIR has been contributing immensely to the industrial, societal and economic development and growth of India for eight decades now. CSIR has helped India overcome many challenges and crisis, from promoting self-sufficiency in the face of technology denials, to handling natural disasters such as earthquakes, floods, pandemic, through appropriate technological solutions.

CSIR has recently developed “CSIR@80: Vision & Strategy 2030 which envisions pursuing science that strives for global impact, the technology that enables innovation-driven industry and nurtures trans-disciplinary leadership thereby catalyzing inclusive economic development for the people of India.

CSIR has been immensely contributing to the UN Sustainable Development Goals. The Session on “**CSIR, India: An Innovation Hub for Global Sustainable Development**” will briefly present these contributions. These can be viewed at

#### Youtube

<https://www.youtube.com/csirindia1942>

#### Facebook

[CSIR, India | Facebook](https://www.facebook.com/csirindia)

#### Twitter

[https://twitter.com/csir\\_ind?lang=en](https://twitter.com/csir_ind?lang=en)

## PROGRAM

### Day 1: 22 September 2023; Time: 1630 hrs to 1900 hrs (IST)

Register: <https://sched.co/1POx4>

Sl. No.	Theme/Title	Topic & Speaker	Time, hrs
	Inaugural Session	<b>Welcome and introduction to the meeting</b> <i>Dr Rama Swami Bansal, Head, ISTAD, CSIR</i>	1630
		<b>Overview of CSIR</b> <i>Dr N Kalaiselvi, Director General, CSIR and Secretary, DSIR</i>	1635
<b>Day 1: Scientific Session: 1640 hrs -1900 hrs</b> Theme - Sustainable Utilization of Resources			
<b>Session 1 - Green Energy and Mobility (SDG 7 - Affordable &amp; Clean Energy; SDG 8 – Decent Work &amp; Economic Growth and SDG 13 – Climate Action)</b>			
Overview of the Session		Chair - Dr Ashish Lele, Director, CSIR-NCL; Co-chair - Dr K Ramesha, Director, CSIR-CECRI	1640
1.	Session 1 - Green Energy and Mobility (SDG 7, 8 and 13)	<b>1. Strengthening R&amp;D ecosystem to meet India's Green H<sub>2</sub> ambitions</b> <i>Dr Chinnakonda S Gopinath, Outstanding Scientist, CSIR-NCL</i>	1645
		<b>2. Powering the future: A comprehensive update on the development status of CSIR battery technologies</b> <i>Dr AS Prakash, Senior Principal Scientist, CSIR-CECRI</i>	1652

Website: [www.csir.res.in](http://www.csir.res.in) ;

Reach out: Dr (Mrs) Rama Swami Bansal, Head, International S&T Affairs Directorate, CSIR, India at Telephone +91-11-23736212; Email: [rsb@csir.res.in](mailto:rsb@csir.res.in)

		<b>3. Enabling India's path to self-reliance in photovoltaics through advancements in molecular light harvesting technologies pioneered at CSIR</b> <i>Dr Suraj Soman, Scientist, CSIR-NIIST</i>	1659
		<b>4. Electric aircraft of CSIR-NAL</b> <i>Dr Achuthan C Pankaj, Principal Scientist, CSIR-NAL</i>	1706
		<b>5. Hydrogen for mobility and beyond</b> <i>Mr Deepesh Gujarathi, Principal Architect (Hydrogen Fuel Cell Technology), M/s KPIT Technologies</i>	1713
<b>Discussion and Q&amp;A</b>			1718
<b>Session 2 - Chemicals (Bulk and Specialty) and Sustainable Materials (SDG 9 – Industry, Innovation &amp; Infrastructure and SDG 11 – Sustainable Cities and Communities)</b>			
<b>Overview of the Session</b>		<b>Chair - Prof Pradeep K Ramancharla, Director, CSIR-CBRI;</b> <b>Co-chair - Dr D Srinivasa Reddy, Director, CSIR-IICT</b>	1725
2.	<b>Chemicals (Bulk and Specialty) and Sustainable Materials (SDG 9 and SDG 11)</b>	<b>1. CSIR catalysing the journey of India as the next chemical manufacturing hub</b> <i>Dr KJ Sreeram, Director, CSIR-CLRI</i>	1730
		<b>2. Sustainability in Construction - Approaches to Address the Known Challenges</b> <i>Dr N Anandavalli, Director, CSIR-SERC</i>	1740
		<b>3. Building climate-resilient cities and communities</b> <i>Dr Krishna S Vatsa, Member, National Disaster Management Authority</i>	1750
<b>Discussion and Q&amp;A</b>			1800
<b>Session 3 - Exploration and Sustainable Unearthing of Treasures (SDG 13 – Climate Action; SDG 14 – Life Below Water and SDG 15 – Life on Land)</b>			
<b>Overview of the Session</b>		<b>Chair - Dr Atul Narayan Vaidya, Director, CSIR-NEERI;</b> <b>Co-chair - Dr Prakash Kumar, Director, CSIR-NGRI</b>	1810
3.	<b>Exploration and Sustainable Unearthing of Treasures (SDG 13, 14 and 15)</b>	<b>1. Land Reclamation through Remediation</b> <i>Dr MP Patil, Chief Scientist, CSIR-NEERI</i>	1815
		<b>2. Sustainable utilization of marine living resources</b> <i>Dr Narsinh L Thakur, Senior Principal Scientist, CSIR-NIO</i>	1825
		<b>3. Exploitation of deep mineral resources – Opportunities and challenges</b> <i>Dr Chandrani Prasad Verma, Senior Principal Scientist, CSIR-CIMFR</i>	1835
		<b>4. Harnessing the potential of mine water for a sustainable future</b> <i>Dr Pallabi Das, Senior Scientist, CSIR-CIMFR</i>	1843
<b>Discussion and Q&amp;A</b>			1850
<b>Vote of Thanks</b> <i>Dr Yatendra K. Satija, Scientist, ISTAD, CSIR</i>			1858

### Day 2: 28 September 2023; Time: 1630 hrs to 1900 hrs (IST)

Register: <https://sched.co/1POxB>

Sl. No.	Theme/Title	Topic & Speaker	Time, hrs
<b>Day 2: Scientific Session: 1630 hrs -1900 hrs</b> <b>Theme - Societal and Rural Development: Efforts of CSIR</b>			
Welcome and introduction to the Day 2: Scientific Sessions			1630
<b>Session 4 - Affordable Healthcare for Global Society (SDG 3 – Good Health and Well-being)</b>			
Overview of the Session		Chair - Dr Ram Vishwakarma, Distinguished Scientist, CSIR; Co-chair - Dr Vinay K Nandicoori, Director, CSIR-CCMB	1633
4.	Affordable Healthcare for Global Society (SDG 3)	1. A comprehensive model for prevention and management of Sickle Cell Anaemia <i>Dr Giriraj Ratan Chandak, J C Bose Fellow, CSIR-CCMB</i>	1638
		2. Indian Breast Cancer Genome Atlas <i>Dr Shantanu Chowdhury, Chief Scientist, CSIR-IGIB</i>	1650
		3. CSIR's R&D in medical instruments and devices for the society <i>Dr Sanjeev Soni, Senior Principal Scientist, CSIR-CSIO</i>	1702
		4. Medical instrumentation <i>Mr. Ravi Prem, M/s. Forbes and Company Ltd.</i>	1714
<b>Discussion and Q&amp;A</b>			1719
<b>Session 5 - Rural Development and Traditional Knowledge - From Hamlets to Industries (SDG 1 – No Poverty; SDG 2 – Zero Hunger; SDG 10 – Reduced Inequality and SDG 12 – Responsible Consumption and Production)</b>			
Overview of the Session		Chair - Dr. Ranjana Aggarwal, Director, CSIR-NIScPR; Co-chair - Dr. Sudesh Kumar Yadav, Director, CSIR-IHBT	1728
5.	Rural Development and Traditional Knowledge - From Hamlets to Industries (SDG 1, 2, 10 and 12)	1. Livelihood creation and upliftment through technology-based interventions <i>Dr Prabodh Kumar Trivedi, Director, CSIR-CIMAP</i>	1733
		2. Traditional knowledge inspired contemporary research for affordable healthcare <i>Dr Radha Rangarajan, Director, CSIR-CDRI</i>	1744
		3. Technology development assessment: Societal impact <i>Dr Sujit Bhattacharya, Chief Scientist, CSIR-NIScPR</i>	1755
		4. Climate change and rural housing (India) <i>Dr PK Das, Member, National Task Force on Rural Housing &amp; Habitat, Ministry of Rural Development</i>	1805
<b>Discussion and Q&amp;A</b>			1816
<b>Session 6 - Concluding Session with a Panel Discussion - Innovations for Global Sustainable Development (SDG 5 – Gender Equality and SDG 17 – Partnerships for the Goals)</b>			
Concluding Session with a Panel Discussion Theme - Innovations for Global Sustainable Development (SDG 5 and 17)		Moderator – Dr Abhay A Pashilkar, Director, CSIR-NAL <b>Panel</b> 1. Dr Ram Vishwakarma, Distinguished Scientist, CSIR 2. Dr Ranjana Aggarwal, Director, CSIR-NIScPR 3. Dr Ashish Lele, Director, CSIR-NCL 4. Dr D Srinivasa Reddy, Director, CSIR-IICT 5. Dr Atul Narayan Vaidya, Director, CSIR-NEERI	1823



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6. *Prof Pradeep K Ramacharla, Director, CSIR-CBRI*
7. *Prof Anil K Gupta, The World Academy of Sciences (TWAS) Council Member*
8. *Mr MD Khan, Senior Consultant, NIRDPR*
9. *UNIDO representative from Ethiopia*
10. *Mr. Declan Kirrane, Chair SSUNGA78*
11. *Dr Rama Swami Bansal, Head, ISTAD, CSIR*