Ministry of External Affairs
NEST Division

NEST Newsletter – January 2023

General Updates

A) Indian Institutions:

MNRE

1) MNRE publishes **National Green Hydrogen Mission** document which aims to provide a **comprehensive action plan for establishing a Green Hydrogen ecosystem and catalyzing a systemic response to the opportunities and challenges of the sunrise secto**r.
https://mnre.gov.in/img/documents/uploads/file_f-1673581748609.pdf
(*Dated: 13 JAN 2023*)

2) Government of India takes several steps to **promote renewable energy in the country** by **issuing guidelines for Production Linked Incentive (PLI) Scheme (Tranche-II) under 'National Programme on High Efficiency Solar PV Modules'**. Letters of award have been issued under Tranche-I of PLI Scheme for **High Efficiency Solar PV Modules, for setting up of 8.737 GW of fully integrated solar PV module manufacturing capacities**. Further, Tranche-II of PLI Scheme for High Efficiency Solar PV Modules, has envisaged **setting up of another about 65 GW per annum of fully/partially integrated solar PV module manufacturing capacity**.
https://pib.gov.in/PressReleasePage.aspx?PRID=1896066
(*Dated: 03 FEB 2023*)

Ministry of Petroleum & Natural Gas

1) Petroleum Minister Shri Hardeep S. Puri has addressed Bioenergy Summit Programme with the theme **"Energy Transition - Solution for a Sustainable Tomorrow"**, which will provide an opportunity for Innovators and a way forward for Clean & Green Energy Solutions for future.
https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1890243
(*Dated: 11 JAN 2023*)

Ministry of Power

1) **India signs MoU with Indonesia-Malaysia-Thailand Growth Triangle Joint Business Council to further adoption of energy efficiency and sustainable practices in the region.**

https://pib.gov.in/PressReleseDetail.aspx?PRID=1896807

(Dated: 06 FEB 2023)

Ministry of Agriculture

1) A MoU was signed with **Digital Green under a public-private partnership framework to build a national-level digital extension platform** to deliver curated content to farmers and **upskill the vast network of extension workers for agriculture, horticulture, fisheries, livestock and rural livelihood missions through certified online courses.**
https://newsonair.gov.in/Main-News-Details.aspx?id=455333
(Dated: 07 FEB 2023)

2) **Prime Minister Shri Narendra Modi inaugurated India Energy Week** 2023 in Bengaluru, Karnataka, which aims to showcase **India's rising prowess as an energy transition powerhouse.**
https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1896729
(Dated: 06 FEB 2023)

3) **Prime Minister Shri Narendra Modi flagged off Oil India Limited's (OIL) indigenously developed hydrogen fuel cell based e-bus.** The bus is with **60 KW capacity fuel cell which uses Proton Exchange Membrane (PEM) technology to produce electricity** and has the tank capacity of 21.9 Kg at 350 bar pressure.
https://pib.gov.in/PressReleasePage.aspx?PRID=1897096
(Dated: 07 FEB 2023)

CSIR

1) A compendium has been published by **CSIR on Advance Materials Technologies under CSIR Advance Material Mission (AMM)** which will support the next level of scale-ups in the field of **Electronic materials &** devices**, Meta-materials & devices and Bio-implants & Healthcare devices**.
https://www.csir.res.in/sites/default/files/Compendium-Advanced-Material-Mission.pdf
(Dated: 17 JAN 2023)

MeitY

1) India's **First Centre of Excellence in Online Gaming** to be set up in Shillong: MoS Shri Rajeev Chandrasekhar**. The Centre is expected to catalyse startups and entrepreneurs from the entire North East Region to build the Next Gen Online Gaming ecosystem.**
https://www.pib.gov.in/PressReleasePage.aspx?PRID=1891007
(Dated: 13 JAN 2023)

2) MeitY received a funding of **Rs 16,549 crores** as a part of budget 2023-2024 for the **development of Semiconductors and Display Manufacturing** in India. Finance Minister Ms. Nirmala Sitharaman pledged a **reduction in customs duties for the import of Li-Ion batteries, camera lenses, and other components used in the manufacture of mobile phones**.
https://www.theindustryoutlook.com/startups/news/budget-2023-meity-invested-rs16549-crores-in-a-bid-to-boost-semiconductor-manufacturing-in-india-nwid-3676.html
(Dated: 02 FEB 2023)

PSA
1) Union Minister of Science & Technology Dr Jitendra Singh told that the entire country will be covered by **Doppler Weather Radar Network by 2025 to predict extreme weather events** more accurately.
https://pib.gov.in/PressReleasePage.aspx?PRID=1891433
(Dated: 15 JAN 2023)

2) G20-Chief Science Advisers Roundtable (CSAR) to deliberate upon and **develop collaborative frameworks for global science and technology (S&T) policy** issues.
https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1892988
(Dated: 23 JAN 2023)

IIT
1) A new and innovative green technology has been developed by the **Indian Institute of Technology (IIT), Ropar – air nano bubble – which can, reportedly, reduce water usage in the textile industry by up to 90 per cent**.
https://apparelresources.com/business-news/sustainability/iit-ropar-developed-innovative-green-technology-reduce-water-usage-significantly/
(Dated: 06 FEB 2023)

IISc
1) **Agnit, a deeptech firm incubated at IISc is offering Gallium Nitride semiconductor components** (wafers & devices) to India for use in 5G equipment to fast charging EVs.
https://news.knowledia.com/IN/en/articles/iisc-firm-offers-tech-with-uses-from-5g-to-fast-charging-evs-1412262f7072e779157a83d6c6811ca1c0a90156
(Dated: 02 JAN 2023)

BPCL

1) A MoU has been signed between **Rajasthan's Energy Department and BPCL to set up a 1 GW renewable energy plant** in Rajasthan.
https://www.thehindubusinessline.com/companies/bpcl-to-set-up-1-gw-renewable-energy-plant-in-rajasthan/article66427158.ece
(Dated: 26 JAN 2023)

ISRO

1) **Mexican space agency, Agencia Espacial Mexicana (AEM), has made a request to Indian Space Research Organisation's (ISRO) to help build and launch a remote sensing satellite for Mexico**, at a recent meeting between Dr. Salvador Landeros Ayala, Director General of AEM and ISRO Chairman S. Somanath.
https://www.indianweb2.com/2023/01/mexican-space-agency-seeking-isros-help.html
(Dated: 02 JAN 2023)

2) ISRO **through Gaganyaan, India's maiden human spaceflight programme, is engaged in development of various technologies, which are essential building blocks for human space missions. The objective of the Gaganyaan is to demonstrate human spaceflight capability in Low earth orbit.**
https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1895793
(Dated: 02 FEB 2023)

3) The second developmental flight of **Small Satellite Launch Vehicle (SSLV), SSLV-D2** was successfully launched by ISRO from Sriharikota space port. The SSLV placed ISROs Earth Observation Satellite EOS-07 into orbit which will carry out new experiments including mm-Wave Humidity Sounder and Spectrum Monitoring Payload. In addition, the SSLV also placed a **10.2 kg satellite belonging to ANTARIS, USA and a satellite named Azaadi SAT-2 which was developed by 750 girl students across India who were guided by Space Kidz India, Chennai**.
https://www.isro.gov.in/mission_SSLV_D2.html
(Dated: 02 FEB 2023)

HAL

1) **Prime Minister dedicated HAL Helicopter Factory** to nation, which is India's largest, based in Tumakuru, Karnataka
https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1896758
(Dated: 06 FEB 2023)

L&T

1) **L&T positions tech arm with Mindtree** to develop futuristic projects, including **driverless cars.**
https://www.thehindubusinessline.com/companies/lt-positions-tech-arm-to-develop-futuristic-projects/article66474219.ece
(Dated: 06 FEB 2023)

B) Think-Thanks:

ORF
1) Global Health **Governance in an Uncertain World**: A Proposed Framework for the G20 towards emerging need to understand the social, economic, commercial, security, and political determinants of health.
https://www.orfonline.org/research/global-health-governance-in-an-uncertain-world/
(Dated: 30 JAN 2023)

Center for Security and Emerging Technology (CSET)
1) Democracies Must **Empower a Biotech Future** for All: To understand the scale of innovation that is being tapped by biotechnology.
https://www.lawfareblog.com/democracies-must-empower-biotech-future-all
(Dated: 20 November 2022)

Carnegie India
1) India needs its **domestic legal frameworks in place before it can compete in the Second Space Age and reap its benefits**.
https://carnegieindia.org/2023/01/31/india-and-second-coming-of-space-age-pub-88906
(Dated: 31 JAN 2023)

Gateway House
1) India and Japan through its existing **strong bilateral and converging interests like economic and financial governance, health, climate commitments and energy transition,** can bridge the rift between G7 and G20 in 2023. The focus theme is on **ensuring access to vaccines and assisting underdeveloped nations in debt distress due to the pandemic and Russia sanctions that have caused rifts over disruptions to supplies of fuel, fertilizer and food.**
https://www.gatewayhouse.in/japan-and-india-in-the-multilateral-hotseat/
(Dated: 19 JAN 2023)

Indian Council for Research on International Economic Relations (ICRIER)

1) IPCIDE (ICRIER Prosus Centre for Internet and Digital Economy) organizes an **Annual Conference on the State of India's Digital Economy will be held on 24th February 2023 at Jacaranda Hall, India habitat Centre, New Delhi**.
https://icrier.org/events/upcoming-conference-ipcide-annual-conference-on-the-state-of-indias-digital-economy/

C) Development in India States

1) **Gujarat:** The **Vedanta-Foxconn $20 billion bid for setting up a fab unit** and is expected to receive government's approval.
https://analyticsindiamag.com/vedanta-foxconn-deal-expected-to-be-first-to-receive-government-approval/
(Dated: 12 JAN 2023)

2) **New Delhi:** The biggest **Drone Show in India, comprising of 3,500 indigenous drones were synchronized** during the Republic Day 2023 celebrations. It depicts the success of start-up ecosystem, technological prowess of the country's youth and pave the way for future path-breaking trends
https://pib.gov.in/PressReleseDetailm.aspx?PRID=1892010
(Dated: 18 JAN 2023)

3) **Uttar Pradesh:** The UP government **signs a MoU with Innogress for setting up India's first quantum computing data center**, 'IQDC' (Indraprastha Quantum Data Center), at Greater Noida. The data center is going to be quantum safe and going to enable high performance computing requirements of New India
https://insidehpc.com/2023/02/uttar-pradesh-goverment-signs-mou-for-quantum-computing-data-center-in-india/
(Date: 07 FEB 2022)

D) International Ecosystem:

1) NASA and the Defense Advanced Research Projects Agency (DARPA) are collaborating to demonstrate a **nuclear thermal rocket engine in space**, **an enabling capability for NASA crewed missions to Mars**. The non-reimbursable agreement, designed to benefit both agencies, outlines roles, responsibilities, and processes aimed at speeding up development efforts.
https://www.prnewswire.com/news-releases/nasa-darpa-will-test-nuclear-engine-for-future-mars-missions-301729418.html
(Dated: 24 JAN 2023)

2) **FACT SHEET: United States and India Elevate Strategic Partnership with the initiative on Critical and Emerging Technology (iCET)**. It will elevate and expand our **strategic technology partnership and defense industrial cooperation between the governments, businesses and academic institutions of two countries**.
https://www.whitehouse.gov/briefing-room/statements-releases/2023/01/31/fact-sheet-united-states-and-india-elevate-strategic-partnership-with-the-initiative-on-critical-and-emerging-technology-icet/
(Dated: 31 JAN 2023)

3) **Google released Bard, its own AI chatbot similar to ChatGPT**, as the race to expand the use of artificial intelligence in language specific system. It will combine the breadth of the world's **knowledge with the power, intelligence, and creativity of large language models through information from the web to provide fresh, high-quality responses**.
https://www.cnet.com/tech/computing/google-unveils-bard-its-chatgpt-rival-for-ai-powered-conversation/
(Dated: 07 FEB 2023)

E) Important News & Articles:

1) **Karkinos Healthcare's, Chennai has developed an Application Suite** which is now one among the top 50 digital health companies integrated in **Ayushman Bharat Digital Mission (ABDM) to achieve Preventive and Promotive healthcare in India**.

https://www.karkinos.in/karkinos-platform-integrating-fragmented-cancer-care-continuum/

(Dated: 05 Jan 2023)

2) Science **predictions for 2047 | Future timeline:** A year that will see the world transform to scientific disruptions that will impact a wide range of sectors.
https://www.quantumrun.com/future-timeline/2047/future-timeline-subpost-science
(Dated: 15 JAN 2023)

3) Carbon Markets Association of India **(CMAI),** a coalition of eminent stakeholders of India's climate change industry and Association of Renewable Energy Agencies of States (**AREAS**) have signed a MOU to provide **regular exchange of information, innovation, knowledge, technological, policy and regulatory developments in carbon trading and assist in the development of Indian carbon market to empower country's stride towards a net-zero future**.
https://solarquarter.com/2023/01/19/cmai-and-areas-sign-mou-to-empower-indias-stride-towards-a-net-zero-future/
(Dated: 19 JAN 2023)

4) The **Chief Minister of Madhya Pradesh Shri Shivraj Singh Chauhan and Union Minister for Science & Technology, Dr. Jitendra Singh, jointly inaugurated "India International Science Festival (IISF-2022) in Bhopal** with the theme, "Marching towards Amrit Kaal with Science, Technology and Innovation i.e. **Quantum Technology, International year of Millets-2023, activities on Waste to Wealth program and efforts to promote the Biotech start-ups.**
https://pib.gov.in/PressReleasePage.aspx?PRID=1892699

(Dated: 21 JAN 2023)

5) Union Health Minister Dr. Mansukh Mandaviya unveils **world's first intranasal COVID19 vaccine, iNNCOVACC** in the presence of Union Minister of State (IC) for Science and Technology Dr Jitendra Singh. It is developed by **Bharat Biotech International Limited (BBIL)** in collaboration with **Biotechnology Industry Research Assistance (BIRAC)**, a PSU under the Dept of Biotechnology, Ministry of Science and Technology.
https://pib.gov.in/PressReleasePage.aspx?PRID=1893922
(Dated: 26 JAN 2023)

6) Raisina Dialogue 2023: The event will **bring together, and build momentum for, two of the Indo-Pacific's influential foreign policy, security and technology dialogues** - the Raisina Dialogue will be held in New Delhi from March 2-4 and The Sydney Dialogue on April 4-5.
https://www.aspi.org.au/news/aspi-and-orf-host-raisina-sydney-18-february
(Dated: 27 JAN 2023)

7) **Financial Budget Facts on Technology:**
a. Atmanirbhar **clean plant program with outlay of Rs 2200 crore** to be launched for boosting the availability of **quality planting material for high value horticultural crops.**

b. **500 new 'WASTE TO WEALTH' plants** under Gobardhan Scheme to be established at a total investment of **Rs 10000 crore**.

c. **Mission to eliminate Sickle Cell Anaemia by 2047** will be launched, which will entail awareness creation through universal screening of 7 crore people in the age group of 0-40 years in affected tribal areas.

d. **10,000 Bio-Input Resource Centres** will be set-up for national-level distributed **micro-fertilizer and pesticide manufacturing network.**

e. Encouraged to **set up a Unity Mall** in state capitals or most prominent tourism centre or the financial capital **for promotion and sale of their own ODOPs (one district, one product), GI products and other handicraft products,** and for providing space for such products of all other States.

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1895320

(Dated: 01 FEB 2023)

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