

National Current Affairs

Karnataka Government launches clouding seeding Project Varshadhari

Karnataka Government has launched clouding seeding Project Varshadhari in Bengaluru under which an aircraft will spray chemicals to induce rainfall.

The cloud seeding project is an experimental project that will cover Bengaluru, Gadag and Yadgir districts of the state

Project Varshadhari

The experimental project aims to condense small water particles by clouds (size less than 10 microns) to droplets of 50 microns, which can constitute rains. The flight for cloud seeding – BQ-100 Beechcraft will spray Silver Iodide, Sodium Chloride and Potassium Chloride to condense the water particles. A committee, comprising meteorologists, experts in cloud physics and hydrologists, will monitor the process.

Cloud seeding

Cloud seeding (also known as weather modification technique) is an artificial way to induce moisture in the clouds so as to cause a rainfall. In this process, either silver iodide, potassium iodide or dry ice (solid carbon dioxide) are spread onto the clouds causing rainfall. These iodide particles rise into the clouds, cause moisture to freeze. These particles act as a base for water vapours to settle on that later crystallises and falls as rain or snow.

This method can be used to bring significant amount of rainfall over a specified area especially in location where rain is badly needed. Several experiments conducted earlier across India were not very effective and gave mixed results. It is not fool proof as seeded clouds may actually travel to another location and do not cause precipitation on the intended location. Moreover there are environmental consequences of spreading of harmful chemicals in atmosphere. It is also very expensive technique. If it is not controlled properly, it may result in undesirable weather conditions like flooding, hail, storms, etc.

ICMR, Health Ministry ink MoU with IVI for vaccine R&D

The Indian Council of Medical Research (ICMR) and Ministry of Health inked Memorandum of Understanding (MoU) with the International Vaccine Institute (IVI) to collaborate on vaccine research and development.

The signing of the MoU is a continuation of India's partnership with IVI to provide safe, effective and affordable vaccines for people around the world. With this partnership, India is committing an annual contribution of US \$5,00,000 to IVI.

Background

India is a vaccine industry powerhouse that supplies 60% of the world's vaccines. India has with a long history of scientific collaboration with IVI. IVI has been partnering with Indian vaccine manufacturers, research institutes, government, and public health agencies on vaccine R&D. One of the most successful collaboration of IVI was with India's Shantha Biotech on development of Shanchol, world's first low-cost oral cholera vaccine. The vaccine was licensed in India in 2009 and WHO-prequalified in 2011.

International Vaccine Institute (IVI)

IVI is Seoul (South Korea) based international nonprofit organization devoted to developing and introducing new and improved vaccines to protect the people, especially children, against deadly infectious diseases. It was established in 1997 on the initiatives of the United Nations Development Programme (UNDP).

Its work is exclusively on vaccine development and introduction specifically for people in developing countries, with a focus on neglected diseases affecting these regions. Currently, IVI has 40 countries and the World Health Organization (WHO) as signatories to its Establishment Agreement. India officially became a signatory to the IVI in 2012.

Indian Council of Medical Research (ICMR)

The ICMR is India's apex scientific body for the formulation, coordination and promotion of biomedical research. It was established in 1911 as Indian Research Fund Association (IRFA) making it one of the oldest and largest medical research bodies in the world. The ICMR functions under the Department of Health Research, Union Ministry of Health and Family Welfare.

17th meeting of FSDC held in New Delhi

The seventeenth Meeting of the Financial Stability and Development Council (FSDC) was held in New Delhi under the Chairmanship of the Union Minister of Finance Arun Jaitley.

The meeting was attended by RBI Governor Dr. Urjit R. Patel, SEBI chairman, IRDAI Chairman along with heads and other senior officers of the Government and financial sector regulators.

Key Highlights of Meeting

- **Macro-economic stability:** FSDC held that India has macro-economic stability on the back of improvements in its macro-economic fundamentals, structural reforms, action taken to address the Twin Balance Sheet (TBS) challenge, extraordinary financial market confidence and long-term positive consequences of demonetization.

- **Challenges facing the Indian economy:** It also discussed the issues and challenges facing the Indian economy and members agreed on the need to keep constant vigil and be prepared of managing any external and internal vulnerabilities.
- **Progress of Financial Sector Assessment Program for India:** It is jointly conducted by the International Monetary Fund (IMF) and the World Bank. It directed that the assessment report should be finalized by end of this calendar year.
- **CERT-Fin and FDMC:** It took note of the developments and progress made in setting up of Computer Emergency Response Team in the Financial Sector (CERT-Fin) and Financial Data Management Centre. It also discussed measures for time bound implementation of the institution building initiative.
- **Central KYC Registry (CKYCR) system:** It also discussed on the CKYCR system and took note of the initiatives taken in this regard by the members and discussed the issues in respect of its operationalization.
- **Regulation of CRAs:** It also deliberated on strengthening the regulation of Credit Rating Agencies (CRAs).

About Financial Stability and Development Council (FSDC)

- FSDC is super regulatory body for regulating financial sector which is a vital for bringing healthy and efficient financial system in the economy. The idea to create it was first mooted by the Raghuram Rajan Committee on Financial Sector Reforms in 2008.
- The FSDC envisages to strengthen and institutionalise mechanism of (i) maintaining financial stability, (ii) Financial sector development, (iii) inter-regulatory coordination along with monitoring macro-prudential regulation of economy.
- **Composition of FSDC:** The Union Finance Minister is its chairman. Besides, heads of the financial sector regulatory authorities (i.e, RBI, SEBI, IRDA, PFRDA), Finance Secretary and/or Secretary, Department of Economic Affairs (Union Finance Ministry), Secretary, Department of Financial Services, and Chief Economic Adviser are its members
- **Two Core functions:** (i) Act as an apex level forum to strengthen and institutionalize the mechanism for maintaining financial stability. (ii) Enhance inter-regulatory coordination and promoting financial sector development in the country.
- **Other functions:** (i) Focus on financial literacy and financial inclusion. (ii) Monitor macro-prudential supervision of the economy. (iii) Assess the functioning of the large financial conglomerates.

Banking & Finance

NABARD Approves Rs 1,350-cr Loan to Rajasthan Government

The National Bank of Agriculture and Rural Development (NABARD) has sanctioned a loan assistance of Rs 1,349.55 crore to the Rajasthan government announced on 20th Aug 2017.

Key Points:

- The loan has been approved for creation of rural infrastructure in the state under the Rural Infrastructure Development Fund (RIDF).
- The sanction includes assistance for construction of two rural drinking water supply projects, strengthening and rehabilitation of 1,614 rural roads and modernisation of three major irrigation projects.
- An amount of Rs 599.84 crore has been sanctioned for rehabilitation of 1,614 roads.
- It will cover all 33 districts of Rajasthan, Rs 469.54 crore for providing potable water to population of 419 villages of Jalore district and Rs 280.17 crore for rehabilitation and modernisation of 3 major irrigation projects located in Udaipur, Banswara and Dungarpur districts.

About NABARD

- National Bank for Agriculture and Rural Development (NABARD) is an apex development financial institution.
- HQ: Mumbai Maharashtra
- Established: 12 July 1982

Two regional rural banks record over ₹150-cr profit in FY17

According to the Reserve Bank of India's 'Report on Trend and Progress of Banking in India', 45 of the 56 RRBs earned profits without carrying any accumulated losses during 2015-16.

Key Notes:

- Karnataka Vikas Grameena Bank and Andhra Pragathi Grameena Bank recorded net profit of more than ₹150 crore during 2016-17.
- Out of the 56 regional rural banks (RRBs) in the country two RRB's have recorded net profit of over ₹150 crore each during 2016-17.
- These are among the 49 RRBs that recorded a profit in 2016-17. Seven RRBs suffered losses during the period.
- As for 19 RRBs, data was taken from the figures compiled by All India Regional Rural Bank Employees' Association.
- The three RRBs promoted by Syndicate Bank – Prathama Bank, Karnataka Vikas Grameena Bank, and Andhra Pragathi Grameena Bank have improved their net profit over 2015-16 and emerged in the top league of profit-making RRBs during 2016-17.
- These RRBs covered 18 districts in three States with a network of 1,563 branches.

- At the end-March 2017, RRBs had 21,398 branches spread across 676 districts and 28 States.

About RRB

- Regional Rural Banks are local level banking organizations operating in different States of India. They have been created with a view to serve primarily the rural areas of India with basic banking and financial services.
- The Regional Rural Banks were owned by the Central Government, the State Government and the Sponsor Bank
- They held shares in the ratios as follows Central Government – 50%, State Government – 15% and Sponsor Banks – 35%

Business

TRAI ink LoI with Malaysian Communications and Multimedia Commission

The Telecom Regulatory Authority of India (TRAI) has signed a letter of intent (LoI) with Malaysian Communications and Multimedia Commission (MCMC) deepen bilateral cooperation in telecom and broadcasting regulation.

The LoI was signed on the sidelines of ongoing ITU-TRAI Asia-Pacific Regulators' Roundtable jointly organised by the International Telecom Union (ITU) and TRAI in New Delhi.

Key Facts

- The LoI will help both regulators to jointly conduct capacity building exercises in the fields of broadcasting and telecommunications regulation. It will help them to work closely in enhancing mutual cooperation and bilateral relations.
- It will also facilitate exchange of information and regulatory best practices in the fields of broadcasting and telecommunications, including new and emerging areas. It will also help in exchange, deployment and attachment of experts from both the countries.

Telecom Regulatory Authority of India (TRAI)

- The TRAI is an independent regulator of the telecommunications business in India. It came into existence by the Act of the Parliament in 1997
- It was established in wake of entry of private sector in telecom industries after Government had launched the National Telecom Policy (NTP) to attract domestic and FDI investment in the telecommunication sector.

- Its mandate is to deliver a fair and transparent environment for fair competition in telecom market. TRAI also fixes or revises the tariffs for telecom services in India.

ISA extends India's exclusive rights to explore Polymetallic Nodules

The International Seabed Authority (ISA) in its 23rd session recently held at Kingston, Jamaica has extended India's exclusive rights to explore polymetallic nodules from seabed in Central Indian Ocean Basin (CIOB).

- These rights extend over 75000 sq. km of area in international waters allocated by ISA for developmental activities for polymetallic nodules.
- The estimated polymetallic nodule resource potential of this area is around 380 million tonnes, containing nickel (4.7 million tonnes), copper (4.29 million tonnes), cobalt (0.55 million tonnes) and manganese (92.59 million tonnes).

Background

- India was the first country to receive the status of a pioneer investor for exploration and utilization of polymetallic nodules.
- It was allocated an exclusive area in Central Indian Ocean Basin by United Nations (UN) in 1987. India is one among the top 8-countries to implement a long-term programme on exploration and utilization of Polymetallic Nodules.
- Through Ministry of Earth Sciences it carries survey and exploration, environmental studies, technology development in mining and extractive metallurgy.

Polymetallic nodules

- Polymetallic nodules (also called as manganese nodules) are small potato-sized (from millimetres to tens of centimetres in diameter) lumps of minerals found in deep sea.
- They contain nickel, copper, cobalt, lead, cadmium, vanadium, molybdenum, titanium in various proportions of which nickel, cobalt and copper are considered to be of economic and strategic importance.
- They are found in abundance carpeting the sea floor of world oceans in deep sea.

International Seabed Authority (ISA)

- ISA is a UN body set up to regulate the exploration and exploitation of marine non-living resources of oceans in international waters. It was established under the 1982 United Nations Convention on the Law of the Sea (UNCLOS). Its headquarters are in Kingston, Jamaica.
- Its mandate is to organize, regulate and control all mineral-related activities in the international seabed area beyond limits of national jurisdiction (exclusive economic zone), an area underlying most of world's oceans. India actively contributes to the work of ISA. It was re-elected as a member of Council of ISA in 2016.

Awards & Recognition

Government announces National Sports Awards 2017

The Union Government bestows National Sports Awards every year to recognize and reward excellence in sports in India.

These awards include Rajiv Gandhi Khel Ratna Award, Dronacharya Award, Arjuna Award, Dhyan Chand Award, Maulana Abul Kalam Azad (MAKA) Trophy and Rashtriya Khel Protsahan Puruskar

2017 Rajiv Gandhi Khel Ratna Award

- It is India's highest sporting award given for the spectacular and most outstanding performance in the field of sports by a sportsperson over a period of four years.
- Recipients are: Devendra (Para Athletics), Sardar Singh (Hockey).

2017 Dronacharya Award

- It bestowed upon coaches for producing medal winners at prestigious international sports events.
- Recipients are: Dr. R. Gandhi (Athletics), Heera Nand Kataria (Kabaddi), G.S.S.V. Prasad (Badminton), Brij Bhushan Mohanty (Boxing), P.A. Raphel (Hockey), Sanjoy Chakraverthy (Shooting) and Roshan Lal (Wrestling).

2017 Arjuna Award

- It is India's second highest sporting award bestowed upon sportsperson for consistently outstanding performance for four years.
- Recipients are: V.J. Surekha (Archery), Khushbir Kaur (Athletics), Arokia Rajiv (Athletics), Prasanthi Singh (Basketball), Laishram Debendro Singh (Boxing), Cheteshwar Pujara (Cricket), Harmanpreet Kaur (Cricket), Oinam Bembem Devi (Football), S.S.P. Chawrasia (Golf), S.V. Sunil (Hockey), Jasvir Singh (Kabaddi), P. N. Prakash (Shooting), A. Amalraj (Table Tennis), Saketh Myneni (Tennis), Satyawart Kadian (Wrestling), Mariyappan (Para-Athletics) and Varun Singh Bhati (Para-Athletics).

2017 Dhyan Chand Award

- It is bestowed upon sportspersons for life time contribution to sports development.
- Recipients are: Bhupender Singh (Athletics), Syed Shahid Hakim (Football), Sumarai Tete (Hockey).

Appointments & Resigns

OPS sworn in as Tamil Nadu Deputy CM

On August 21, 2017 Senior AIADMK leader O Panneerselvam was sworn in as the deputy chief minister of Tamilnadu .

- He has taken an oath by Governor Vidyasagar Rao at Raj Bhavan.
- The two factions of the AIADMK merged, six months after they split following the death of then Chief Minister J. Jayalalithaa.
- Paneerselvam was made the Coordinator of the merged AIADMK. Chief Minister K. Palaniswami will be the Joint Coordinator, the Chief Minister announced at a brief function at the party headquarters while announcing the merger.

Acquisitions & Mergers

ONGC board approves HPCL takeover of 51.11% stake

The Oil and Natural Gas Corp (ONGC) has given 'in-principle' approval to acquire government's 51.11% stake in Hindustan Petroleum Corp Ltd.

Key Points:

- The board constituted a committee of directors to examine various aspects of the acquisition and to provide its recommendations to the board of directors.
- HPCL is likely to take over Mangalore Refinery and Petrochemicals Ltd (MRPL) to bring all the refining assets of ONGC under one unit.
- ONGC currently owns 71.63% of MRPL while HPCL has 16.96% stake in it.
- HPCL will become a subsidiary of ONGC and will remain a listed company post the acquisition.
- The government has also constituted a committee which is headed by Finance Minister Arun Jaitley.
- It comprising oil minister Dharmendra Pradhan and road minister Nitin Gadkari to work out the modalities of the sale.
- HPCL will add 23.8 million tonnes of annual oil refining capacity to ONGC's portfolio, making it the third-largest refiner in the country after IOC and Reliance Industries.

About ONGC

- Oil and Natural Gas Corporation Limited (ONGC) is an Indian multinational oil and gas company headquartered in Dehradun, Uttarakhand, India.
- It is a Public Sector Undertaking (PSU) of the Government of India, under the administrative control of the Ministry of Petroleum and Natural Gas.
- Founded on 14th August 1956
- Chairman and MD: D.K. Sarraf

Science & Technology

Google Launches Android 8.0 names “Oreo”

On August 21, 2017 Google has announced the final version of Android 8.0, now known to be called Oreo.

New Features of Android Oreo

- It minimises background app activity
- Picture in Picture lets you see two apps at once
- Notification dots quickly show you what’s new, and can be swiped off screen
- Android Instant Apps launch within your browser with no installation
- Google Play Protect scans apps to keep your device and data safe
- Improved battery life and 2x faster to boot up
- Redesigned emoji library with more than 60 new emoji
- It helps to auto fill remembers app logins

Android O is much more streamlined than Nougat with various OS optimisations. According to Google, devices boot twice as fast and all apps run faster and smoother by default.

Scientists discover new therapy to prevent sepsis in new born babies

A team of scientists from US have discovered an inexpensive prevention technique (therapy) against sepsis in new born babies. The team was led by US-based Indian doctor Dr Pinaki Panigrahi.

The therapy has been found to reduce the risk of sepsis infection by 40% in trials and it can be inexpensive – less than one dollar for a course.

Need

Each year globally, more than 600,000 infants die of sepsis most of them in developing countries. In India, more than a quarter of neonatal deaths are due to sepsis. In a significant number of these cases, the infection probably begins in the gut.

New prevention technique

- In the new oral prevention technique, infants are fed with good bacteria (probiotic bacteria) that populates in his/her gut and block (kill) harmful bacteria. The probiotic bacterial strain is also aided with a non-absorbable sugar to enhance its ability to effectively colonize the gut.
- Researchers call it as probiotic-sugar combination, a symbiotic. The oral therapy starts during day 2-4 of life, as a preventive measure, much like a vaccine. The technique is also found beneficial in reducing lower respiratory tract and other infections and also improving immunity status.

Sepsis

- Sepsis is a life-threatening illness primarily caused by bacterial infections that spreads fast through the blood leading to organ failure. It is caused by an immune response triggered by an infection i.e. body's response to infection causes injury to its own tissues and organs. Sepsis infections are also more common in elderly people and those with a weak immune system.
- Common signs and symptoms include fever, increased heart rate, increased breathing rate, and confusion. There also may be symptoms related to a specific infection, such as pneumonia, kidney infection blood infection and abdominal infection. Currently, no efficient means of prevention is available.