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प्रौद्योगिकी मंत्रालय
MINISTRY OF
SCIENCE AND
TECHNOLOGY

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'Dolphins return to the Ganga in U.P.'

The Hindu Bureau

LUCKNOW

Dolphins have started coming back to the Ganga with improvement in the quality of the river water made possible by the Namami Gange programme, the Uttar Pradesh government said on Sunday. The

government said that with the completion of 23 projects under the programme started in 2014, the State had stopped the flow of more than 460 MLD (million litres a day) of sewage into the Ganga.

"Under the programme, additional treatment capacity of about 33 MLD will

also be created between September 2022 and December 2022 in Jhansi, Kanpur, Unnao, Shuklaganj, Sultanpur Budhana, Jaunpur and Baghpat at the cost of ₹2304.55 crore," the government said.

Dolphins have been breeding in Brijghat, Naroara, Kanpur, Mirzapur and

Varanasi, which is likely to increase their number. The present dolphin population in the Ganga in the State is estimated at 600.



Read | The day of the dolphin
bit.ly/3SSE4tT

Initiatives taken to conservations

- **Project Dolphin:** a conservation effort for Ganges river dolphins and the riverine ecosystem. The Ministry of Environment, Forests, and Climate Change in India is funding the project.
- **Dolphin Sanctuary:** There is a Ganges Dolphin Sanctuary called Vikramshila Gangetic Dolphin Sanctuary in Bihar. Locals of Bihar called Gangetic Dolphin as 'Soons'
- **Conservation Plan (2010- 2020):** India also had started the Dolphin Conservation Programme to conserve the habitat of the Ganges river dolphin and secure a future for the endangered species.
- **Annual Survey:** WWF-India in collaboration with Uttar Pradesh Forest Department started the Annual Gangetic River Dolphin Survey in October 2019.
- **National Dolphin Research Centre (NDRC):** It is coming up on the 4,400 square metre plot of land on the premises of Patna University, near the banks of the Ganga (200 metres from the Ganga).

GANGETIC DOLPHIN

(Syllabus: GS Paper 3 - Env & Eco)

Context: Dolphins have started coming back to the Ganga with improvement in the quality of the river water made possible by the Namami Gange programme.

Gangetic Dolphin

- **About:** The Ganges River Dolphin or also called '**Susu**,' is the National Aquatic Animal of India.
 - It is the **official animal** of the Assam's capital Guwahati.
 - Ganges River Dolphin along with Indus River Dolphin is the **sub-species of South Asian River Dolphin**.
- **Mythology:** Dolphin is considered as the vehicle of Goddess Ganga.
- **Scientific Name:** Platanista gangetica gangetica.
- **Discovery:** Officially discovered in 1801.
- **Population:** The global population of the species is estimated at 4,000, and **nearly 80% found in the Indian subcontinent**.
- **Habitat:** The Ganges river dolphin can only live in freshwater and is essentially blind. The original stretches where they are found:
 - Ganges-Brahmaputra-Meghna River Systems
 - Karnaphuli-Sangu River Systems; of Nepal, India, and Bangladesh
- **Significance:** reliable indicator of the health of the entire river ecosystem.
 - They are at the **apex of the aquatic food chain**.
 - They use the way of '**Echolocation**' to **trap their prey**.
 - They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to "see" an image in their mind.
- **Conservation Status:**
 - **International Union for the Conservation of Nature (IUCN):** Endangered.
 - **Convention on International Trade in Endangered Species (CITES):** Appendix I (most endangered).
 - **Convention on Migratory Species (CMS):** Appendix II (migratory species that need conservation and management or would significantly benefit from international co-operation).
 - **Indian Wildlife (Protection), Act 1972:** Schedule I.
- **National Ganga River Dolphin Day:** The National Mission for Clean Ganga celebrates 5th October as National Ganga River Dolphin Day.

BOI to raise ₹2,500 cr through AT1 bonds

Bank of India (BOI) plans to raise up to ₹2,500 crore in capital through additional tier I bonds (AT1) bonds to support business growth.

The top brass is meeting on November 4 to consider the proposal of capital raising by issue of additional tier-I (AT1) bonds up to ₹2,500 crore in one or more tranches, the bank told BSE.

There is investor interest in AT1 instruments of banks due to attractive coupons. Last month, State Bank of India raised ₹6,872 crore at a cut-off of 7.75 per cent through AT1 bonds.

As of June 30, BOI's capital adequacy stood at 15.61 per cent with tier-I of 13.27 per cent

and tier-II of 2.34 per cent. The bank has a policy to maintain capital adequacy above the threshold of 14 per cent. That is, it would not allow CAR to fall below 14 per cent level.

Bank executives said with 14 per cent CAR as floor, the buffer to support growth is 1.5 per cent. The bank will need more capital to support credit growth.

BOI's total advances grew by 15.20 per cent year-on-year (YoY) to ₹4.77 trillion till the end of June. Of this, domestic advances rose 9.72 per cent to ₹4 trillion.

According to RBI data, the banking system credit rose by 17.9 per cent YoY till early October 2022.

ABHIJIT LELE

Context Bank of India (BOI) plans to raise up to ₹ 2,500 crore in capital through additional tier I bonds (AT1) bonds to support business growth.

Additional tier I bonds (AT1) bonds

- **About:** AT1 bonds are a type of perpetual debt instrument that banks use to augment their core equity base and thus comply with Basel III norms.
- **Origin:** These bonds were introduced by the Basel accord after the global financial crisis to protect depositors.
- **Different from other debt instruments:** These bonds are perpetual in nature - they **do not carry any maturity date**.
 - They **offer higher returns to investors** but compared with other **vanilla debt products**, these instruments carry a higher risk as well.
 - These bonds are **subordinate to all other debt** and senior only to equity.
 - **Banks have a call option** that permits them to redeem these bonds after a certain period.
- **High-risk instruments:** Since these bonds **can be written down by banks** under the directions of the Reserve Bank of India (RBI) in the event of an institutional failure, they are **seen as high-risk instruments**.
 - If the bank reaches the point of non-viability, AT1 bonds are the first part of debt that will be written down.
- **Regulation:** AT-1 bonds are **regulated by the Reserve Bank of India (RBI)**.

Basel III Norms

- **About:** It is an internationally agreed set of measures developed by the Basel Committee on Banking Supervision in response to the financial crisis of 2007-09.
- **Origin:** Basel-III is third in the series of accords following Basel-I and Basel-II. It was released in December, 2010, in Basel, Switzerland.
- **Objective:** The measures aim to strengthen the regulation, supervision and risk management of banks.
- **Built upon three solid pillars of:** minimum regulatory capital requirement based on risk-weighted assets or RWAs, a supervisory review process, and proper market disclosure.
- **Banks' regulatory capital:** According to Basel-III norms, **divided into Tier 1 and Tier 2:**
 - Tier 1 is subdivided into Common Equity Tier-1 (CET-1) and Additional Tier-1 (AT-1) capital. If minimum Tier-1 capital falls below 6%, it allows for a write-off of these bonds under the Basel norms.
 - **CET-1 capital includes equity instruments** where returns are linked to the banks' performance and therefore the performance of the share price. They have no maturity.
 - **CET and AT-1 are called Common Equity.** Under Basel III norms, minimum requirement for Common Equity Capital has been defined.
 - **Tier 2 capital consists of unsecured subordinated debt** with an original maturity of at least five years.

‘India, GCC group likely to start free trade pact negotiations next month’

PRESS TRUST OF INDIA
NEW DELHI, OCTOBER 30

INDIA AND the Gulf Cooperation Council (GCC) member countries are expected to start negotiations for a free trade agreement next month with an aim to boost economic ties between the two regions, an official said.

GCC is a union of six countries in the Gulf region — Saudi Arabia, UAE, Qatar, Kuwait, Oman and Bahrain.

"Terms of reference for the agreement are being finalised and we expect to launch the negotiations next month," the official said.

India has already implemented a free trade pact with the UAE in May this year.

According to experts, the GCC region holds huge trade potential and a trade agreement would help in further boosting India's exports to that market.

Rakesh Mohan Joshi, Director, Indian Institute of Plantation Management, Bangalore, said the

GCC is a union of six countries in the Gulf region — Saudi Arabia, UAE, Qatar, Kuwait, Oman and Bahrain

GCC market is unexploited by domestic exporters and it holds huge potential. "GCC is a major import dependent region. We can increase our exports of food items, clothing and several other goods. Duty concessions under a trade agreement will help in tapping that market. It will be a win-win situation for both sides," Joshi said.

Mumbai-based exporter and founder chairman of Technocraft Industries India, Sharad Kumar Saraf said the GCC has emerged as a major trading partner for India and there is huge potential for increasing investments between the two regions.

"FTA will have a major benefit for both the sides," Saraf said. Sharing similar views,

Federation of Indian Exports Organisation (FIEO) Vice Chairman Khalid Khan said sectors like chemicals, textiles, gems and jewellery and leather will get a major impetus by this agreement.

India imports predominately crude oil and natural gas from the Gulf nations like Saudi Arabia and Qatar, and exports pearls, precious stones; metals; imitation jewellery; electrical machinery; iron and steel; and chemicals to these countries. India's exports to the GCC increased by 58.26 per cent to about USD 44 billion in 2021-22 against USD 27.8 billion in 2020-21, according to data of the commerce ministry.

The share of these six countries in India's total exports has risen to 10.4 per cent in 2021-22 from 9.51 per cent in 2020-21. Similarly, imports rose by 85.8 per cent to USD 110.73 billion compared to USD 59.6 billion in 2020-21, the data showed.

The share of GCC members in India's total imports rose to 18

per cent in 2021-22 from 15.5 per cent in 2020-21.

Bilateral trade has increased to USD 154.73 billion in 2021-22 from USD 87.4 billion in 2020-21.

Besides trade, Gulf nations are host to a sizeable Indian population. Out of about 32 million non-resident Indians (NRIs), nearly half are estimated to be working in Gulf countries.

These NRIs send a significant amount of money back home.

According to a November 2021 report of the World Bank, India got USD 87 billion in foreign remittances in 2021. Of this, a sizeable portion came from the GCC nations.

Saudi Arabia was India's fourth-largest trading partner last fiscal. From Qatar, India imports 8.5 million tonnes a year of LNG and exports products ranging from cereals to meat, fish, chemicals, and plastics.

Kuwait was the 27th largest trading partner of India in the last fiscal, while the UAE was the third-largest trading partner in 2021-22.

Context: India and the Gulf Cooperation Council (GCC) member countries are expected to start negotiations for a free trade agreement next month with an aim to boost economic ties between the two regions.



Gulf Cooperation Council (GCC)

- **About:** It is an economic and political union comprising of all the Arab countries of the Persian Gulf except Iraq.
- **Origin:** It was formed in 1981 by an agreement among Saudi Arabia, Bahrain, Oman, Kuwait, Qatar and the United Arab Emirates (UAE), that was concluded in Riyadh, Saudi Arabia.
- **Structure of the GCC:** Supreme Council (the highest authority), the Ministerial Council and the Secretariat General.
- **Headquarter:** The Secretariat is located in Riyadh, Saudi Arabia.
- **Members:** The six members of the GCC are Saudi Arabia, Qatar, Oman, UAE, Bahrain and Kuwait. The members comprise:
 - 2 absolute monarchies (Saudi Arabia, Oman)
 - 3 constitutional monarchies (Qatar, Bahrain, Kuwait)
 - 1 federal monarchy (UAE)
- **GCC and India:** Although, India is not one among six members of GCC, it has emerged as a major trading partner of India.
 - India and GCC members are members of the FATF.

Centre to expand solar park scheme

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The Union government plans to launch the second phase of a dedicated programme to develop solar parks across the country that will aim to plug loopholes and overcome slow progress.

Two officials with knowledge of the matter said the expanded scheme would seek to address the issue of solar park developers failing to make initial investments and delaying development of projects till they receive money from power producers who place bids to develop power in such projects.

The government is also looking to address the issue of inflated detailed project reports (DPR), they said.

"The people who come for developing solar parks, they don't put in any money. They first do the bids (for power developers). The money which comes from bids, they develop the solar parks," said one of the officials cited above.

The scheme, 'Development of Solar Parks and Ultra Mega Solar Power Projects', was launched in December 2014 to help solar project developers



The focus on floating solar parks will reduce the need for vast stretches of land to set up solar parks. AP

set up projects in a plug-and-play model. The scheme is valid till the end of this fiscal. The government now plans to launch the second phase of

this scheme with a focus on floating solar projects.

"We are thinking of expanding the scheme and coming up with a second part, particularly to take care of floating solar parks. The cost is higher in floating solar parks. Subsidy rates will be better," the second official said.

The scheme, 'Development of Solar Parks and Ultra Mega Solar Power Projects', was launched in December 2014 to help solar project developers

financial assistance (CFA) of up to Rs 20 lakh per MW or 30% of the project cost, including grid-connectivity cost, whichever is lower.

The solar parks are developed in partnerships with state governments and their agencies, CPSUs, and private entrepreneurs.

The implementing agency is termed as a solar power park developer (SPPD). Post the selection of the SPPD, bids are sought for power developers, which are largely independent power producers (IPP) to produce power at the site in a plug and play model.

On the instances of SPPDs lagging in infrastructure development, Amit Kumar, partner and leader for Power, Utilities and Mining, PwC India said: "The scheme is aimed at providing plug-and-play model of infrastructure for the power developers, but the opposite happens in some instances where the SPPD starts development of the project only after money comes in from the IPPs. This delays the project."

Further, according to sector experts, project development is delayed even if the SPPDs receive the grant from the Centre for the project.

The focus on floating solar parks will reduce the need for vast stretches of land to set up similar parks. However, the technology for floating solar

module projects, wherein photovoltaic solar panels are mounted on floating structures on water bodies, is expensive.

Queries sent to the ministry of new and renewable energy (MNRE) remained unanswered till press time.

Under the current scheme, the MNRE provides central

The solar parks are developed in partnership with state govts, their agencies, CPSUs, and private entrepreneurs

SOLAR PARK SCHEME

(Syllabus: GS Paper 3 - Economy & Infrastructure)

Context: The Union government plans to launch the second phase of a dedicated programme to develop solar parks across the country that will aim to plug loopholes and overcome slow progress.

Solar Park Scheme

- **Origin:** It was launched by the **Ministry of New & Renewable Energy** in 2014.
- **Key Features:** It proposes to provide financial support by the Government of India to establish solar parks.
 - It was proposed to set up at least 25 Solar Parks and Ultra Mega Solar Power Projects.
 - It aimed at over 20,000 MW of solar power installed capacity within a span of 5 years starting from 2014-15.
 - The capacity of the Scheme has now been enhanced from 20,000 MW to 40,000 MW in 2017.
 - There are eight modes under which the scheme is being implemented.
- **India's largest solar park:** Under this scheme, India's largest solar park of 4750 MW is being set up by NTPC in Rann of Kutch, Gujarat.

Ultra-Mega Renewable Energy Power Parks (UMREPP) scheme

- **About:** It is a scheme to develop Ultra Mega Renewable Energy Power Parks (UMREPPs) under the existing Solar Park Scheme.
- **Objective:** To provide land upfront to the project developer and facilitate transmission infrastructure for developing Renewable Energy (RE) based Power Parks with solar/wind/hybrid and also with storage systems.

NEW RULE RBI in July ordered discontinuation of cards that haven't been used for over a year; 0.3 m fall in Sept much less than 2.3 m seen in Aug

Credit Card Numbers Continue to Slip after Deactivation Order

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Mumbai: The Reserve Bank of India (RBI) order on discontinuing inactive credit cards continued to negatively impact the industry size, with top-tier lenders such as HDFC Bank, Axis Bank and ICICI Bank seeing a decline in the number of active credit cards.

Private lender HDFC Bank continued to be the worst affected, with total cards in force down by 1.6 million month on month. Bankers say while the total credit card numbers will normalise soon, they are also looking to change the strategy with regard to onboarding customers.

"It's about the clear intent to use the card," said Parag Rao, country head — Payments, Consumer Finance, Technology and Digital Banking, HDFC Bank. "It's also time where fees need to come back because anything you get for free, you don't use. It's actually time to get back fees because customers really see true value only when they pay for something."

Rao added that the overall industry could see a drop of 8-9% in total credit cards in force.

The central bank's rule states that if a credit card has not been used for more than one year, the process to close the card shall be initiated after intimating the cardholder. If no

Declined Again

Top-tier banks such as HDFC Bank, Axis, ICICI see decline in number of active credit cards

HDFC Bank deactivated around 2.4 m cards during Q2FY23, added 1.2 m credit cards

HDFC Bank's Parag Rao says industry could see 8-9% drop in total credit cards in force

Axis Bank deactivated 1.1 m credit cards in Sept, ICICI closed 0.4 m cards

TOTAL CREDIT CARDS		
July-end	August	September
80.3 m	78 m	77.7 m

Analysts expect the trend to continue for some more

Bankers looking to change the strategy with regard to onboarding customers

reply is received from the cardholder within 30 days, the card account shall be closed by the card-issuer, subject to payment of all dues. The RBI rule came into effect in July.

Although the downward trend continued in September, the fall was less steep than in August. Total credit cards fell by 0.3 million in September as compared to 2.3 million in August. While total credit cards were around 80.3 million at the end of July, it dropped to 78 million in August and 77.7 million in September.

On an individual basis, HDFC Bank deactivated around 2.4 million cards during Q2FY23 which were inactive for a certain period and at the same time added 1.2 million new credit cards, taking its

card portfolio to around 16.3 million. HDFC Bank is also losing market share in cards outstanding portfolio and has lost around 200 bps in the last year, down from 23% in September 2021 to 21% in September 2022. In September, Axis Bank deactivated 1.1 million credit cards while ICICI Bank closed 0.4 million cards.

"The number of new credit cards added to the overall card portfolio continued to remain negative for the second consecutive month, down by 2.6 million in two months," said Bunty Chawla, analyst with IDBI Capital.

"We expect the trend to continue for some more time led by players reporting the deactivated cards details."

RBI NORMS FOR CREDIT CARDS

(Syllabus: GS Paper 2 - Economy)

Context: The Reserve Bank of India (RBI) order on discontinuing inactive credit cards continued to negatively impact the industry size, with top-tier lenders such as HDFC Bank, Axis Bank and ICICI Bank seeing a decline in the number of active credit cards.

RBI Norms for Credit Cards

- **About:** On 21st April 2022, the Reserve Bank of India (RBI) issued a fresh set of guidelines for the issuance of debit and credit cards.
- **Applicability:** These newly issued guidelines will come into effect from July 1 2022 and **will be applicable to all banks** except state cooperative banks, payments banks, and district central cooperative banks.
 - Also, **all NBFCs** operating in India should follow the new norms of card issuance.
- **Issuers:** Card issuers are banks that issue debit or credit cards and **NBFCs which have been permitted by RBI** to issue credit cards in India.
- **Guidelines on credit cards:**
 - For credit card business, **scheduled commercial banks (SCBs) other than Regional Rural Banks (RRBs) with a net worth of ₹100 crore and above** are now allowed to undertake credit card business either independently or in a tie-up arrangement with other card-issuing banks/NBFCs with the approval of their Boards.
 - For setting up separate subsidiaries for undertaking credit card business, these **banks will need prior approval from the Reserve Bank.**
 - **RRBs are allowed to issue credit cards** in collaboration with their sponsor bank or other banks.
 - To issue credit cards, **the issuers are directed to provide a one-page Key Fact Statement** along with the credit card application containing the important aspects of the card such as rate of interest, and quantum of charges, among others.
 - In case of rejection of a credit card application, **the card issuer shall convey in writing the specific reasons** which led to the rejection of the application.
 - RBI directs that card issuers can consider introducing, at the option of the customers, an insurance cover to take care of the liabilities arising out of lost cards, card frauds, etc.
 - For those offering card issuance in tie-up with insurance companies, the **card issuers are required to obtain explicit consent in writing or digital mode** from the cardholders along with the details of the nominee/s.
 - To ensure the protection of the card, the **issuers are directed to seek One Time Password (OTP) based consent from the cardholder for activating a credit card** if the same has not been activated by the customer for more than 30 days from the date of issuance.
 - **If no consent is received for activating the card, card issuers shall close the credit card account** without any cost to the customer within seven working days from the date of seeking confirmation from the customer.

How fingerprint database helped cops nab burglars

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New Delhi: With the help of National Automated Fingerprint Identification System (NAFIS), Delhi Police has cracked two burglary cases. After two businessmen in Safdarjung Enclave filed complaints about the burglaries, the fingerprints collected from the crime spots were matched with the national fingerprint database of the criminals and the two accused, including a Bangladeshi national, were identified. Both have been arrested.

Deputy commissioner of police (southwest) Manoj C said the first incident was reported on August 16, in which some valuables were stolen from a businessman's house. Another case was reported on September 18 about a burglary at a flat. "The mobile crime team's fingerprint expert, Jaswant Singh, developed the latest prints, utilising modern scientific technique, and they were processed on priority at Finger Print Bureau on the most efficient and latest gadget, NAFIS. Experts analysed and compared a tiny portion in the form of a chance print. Finally, the identity of one Mohammad Dulal, from Bangladesh, was revealed and he was arrested," he said. The other chance print matched with Karam's, a bad character from Malviya Nagar. He was found to be lodged in a jail in another case.

NAFIS, launched in August, has fingerprint database of criminals from across India. A match can be found within a few minutes if the database has the fingerprint.

Context: With the help of National Automated Fingerprint Identification System (NAFIS), Delhi Police has cracked two burglary cases.

National Automated Fingerprint Identification System

- **About:** It is a **country-wide, centralised and searchable database** of crime- and criminal-related fingerprints.
 - **Madhya Pradesh** became the first state in the country to identify a deceased person through NAFIS.
- **Developed and managed by:** National Crime Records Bureau (NCRB) at the Central Fingerprint Bureau (CFPB) in New Delhi.
- **Key Features:**
 - **Web-based application:** The web-based application functions as a **central information repository by consolidating fingerprint data from all states and Union Territories.**
 - **Unique ID:** NAFIS assigns a **unique 10-digit National Fingerprint Number (NFN)** to each person arrested for a crime.
 - This **unique ID will be used for the person's lifetime**, and different crimes registered under different FIRs will be linked to the same NFN.
- **Utility of NAFIS:** It enables law enforcement agencies to upload, trace, and retrieve data from the database in real time on a 24×7 basis.

Automation project in India

- **Fingerprint database:** Upon the recommendations of the National Police Commission in 1986, the **Central Fingerprint Bureau first began to automate the fingerprint database.**
- **FACTS 1.0:** It began with digitizing the existing manual records through **India's first Automated Fingerprint Identification System (AFI) in 1992**, called Fingerprint Analysis & Criminal Tracing System (FACTS 1.0).
- **FACTS 5.0:** The latest iteration, **FACTS 5.0, which was upgraded in 2007**, was considered to have "outlived its shelf life", according to a 2018 report by the NCRB and thus needed to be replaced by NAFIS.

PM announces ex-gratia from PMNRF for the victims of mishap in Morbi

Context: The Prime Minister has **announced an ex-gratia from the Prime Minister's National Relief Fund (PMNRF) for the victims of the mishap in Morbi (Gujarat)** where many people killed due to bridge collapsed.

Prime Minister's National Relief Fund (PMNRF)

- **About:** It was established in 1948 with **public contributions to assist displaced persons from Pakistan**.
 - PMNRF has **not been constituted by the Parliament**.
 - The resources of the PMNRF are now utilized primarily to render **immediate relief** to families of those killed in **natural calamities** like floods, cyclones and earthquakes, etc. and to the victims of the major accidents and riots.
 - Assistance from PMNRF is also rendered, to **partially defray the expenses for medical treatment** like heart surgeries, kidney transplantation, cancer treatment, etc.
- **Composition:** Prime Minister is the Chairman of PMNRF and is assisted by Officers/ Staff on honorary basis.
- **Funds:** In general, funds are either disbursed immediately or they are committed for specific purposes. The balance of the funds invested in various forms with scheduled commercial banks and other agencies to ensure long term sustainability.
 - The fund is **recognized as a Trust under the Income Tax Act** and the same is managed by Prime Minister or multiple delegates for national causes.
 - Disbursements are **made with the approval of the Prime Minister**.
 - PMNRF is **exempt under Income Tax Act**.
- **Type of contributions:** PMNRF accepts only voluntary donations by individuals and institutions.
 - Contributions flowing out of budgetary sources of Government or from the balance sheets of the public sector undertakings are not accepted.
 - At the time of natural calamity of devastating scale, Prime Minister, makes an appeal for donation to the fund.
 - **These contributions also qualify as CSR (corporate social responsibility)** spend for companies, making it more attractive in terms of tax exemptions.

PM dedicates Maze Garden and Miyawaki Forest in Ekta Nagar, Gujarat

Context: The Prime Minister dedicated Maze Garden and Miyawaki Forest in Ekta Nagar, Gujarat.

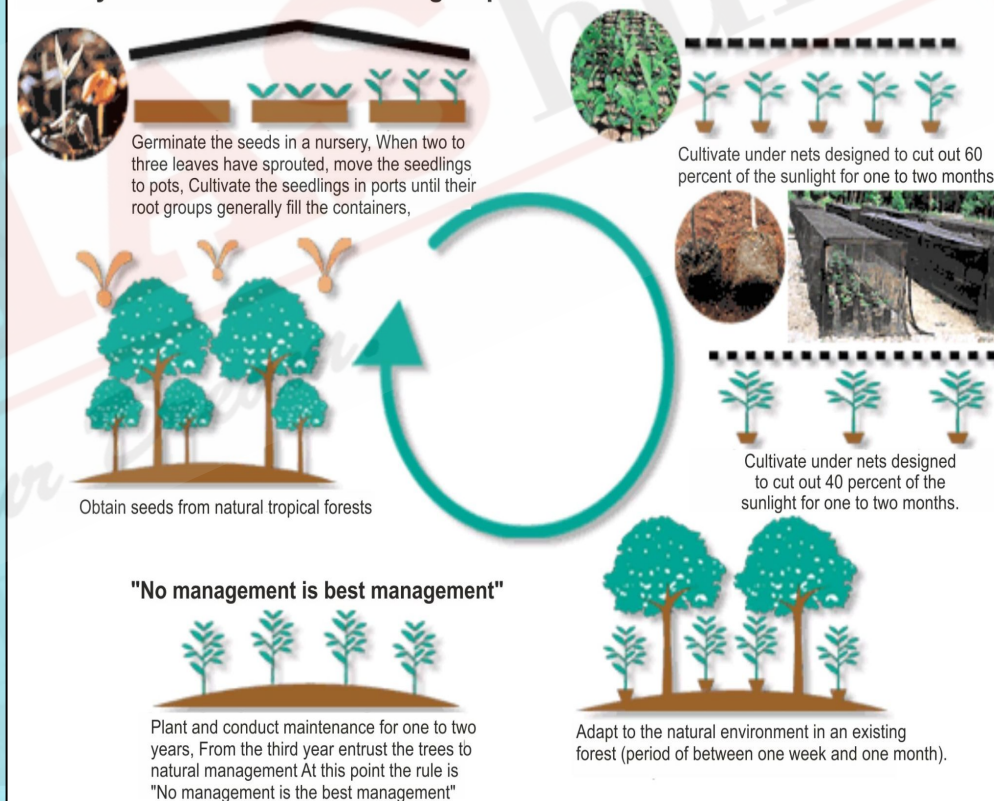
Key Points

- Miyawaki forest and Maze garden are **new attractions at the Statue of Unity.**
- The Maze Garden at Kevadia has been **built in the shape of 'Yantra'** that emanates positive energy. The **key objective for choosing this design was to bring about symmetry** while focusing on building an intricate network of pathways.
- The Miyawaki Forest will be another tourist attraction for people visiting Ekta Nagar.
 - **This forest is named after the technique developed by a Japanese botanist and ecologist Dr Akira Miyawaki** to plant saplings of various species that are planted close to each other which develops into a dense urban forest.
- **The Miyawaki Forest will include the following divisions:** A native Floral Garden, a Timber Garden, a Fruit Garden, a Medicinal Garden, a Miyawaki section of mixed species and a Digital Orientation Centre.

Miyawaki Method

- **About:** a technique pioneered by Japanese botanist Akira Miyawaki, that **helps build dense, native forests in a short time.**
- **Method:** This method includes **planting trees (only native species) as close as possible in the same area** which not only saves space, but the planted saplings also support each other in growth and block sunlight reaching the ground, thereby preventing the growth of weed.
 - The native trees of the region are identified and divided into **four layers - shrub, sub-tree, tree, and canopy.**
 - The **saplings become maintenance-free** (self sustainable) after the first three years.

The Miyawaki method for restoring tropical forests



India's first indigenous Overhauser Magnetometer may show the way towards reducing costs of sensing experiments essential for geomagnetic sampling

Context: Indian scientists have developed an Overhauser Magnetometer, one of the most accurate magnetometers extensively used by all magnetic observatories around the world, making way for reducing the cost of sampling and sensing experiments essential for geomagnetic sampling.

OVH magnetometers

- They are **known for their higher accuracy, higher sensitivity, and efficient power consumption** and hence find applications in all magnetic observatories worldwide as well as in international space programs.
- The **Indian Institute of Geomagnetism (IIG)** has developed these magnetometers as part of its technology development program.

Magnetometer

- **About:** an instrument for **measuring the strength and sometimes the direction of magnetic fields**, including those on or near the Earth and in space.
 - The **area around a magnetic material or a moving electric charge** within which the force of magnetism acts is known as the Magnetic Field.
 - The **first magnetometer was created by Carl Friedrich Gauss**.
- **Utility:** Magnetometers are also used to calibrate electromagnets and permanent magnets and to determine the magnetization of materials.

Indian Institute of Geomagnetism

- **About:** It is an **autonomous research institution** established by the Government of India's Department of Science and Technology.
- **Function:** The facility is engaged in basic and applied research in geomagnetism, as well as allied areas of geophysics, atmospheric physics and space physics, as well as plasma physics.
 - The institute currently **operates 12 magnetic observatories and actively participates in the Indian Antarctic Program**.
 - The **Indian Antarctic Programme is a multi-disciplinary, multi-institutional programme** under the control of the National Centre for Polar and Ocean Research, Ministry of Earth Sciences, Government of India.
 - Under the programme, atmospheric, biological, earth, chemical, and medical sciences are studied by India, which has carried out 40 scientific expeditions to the Antarctic.

KISAN CREDIT CARD (KCC) (Syllabus: GS Paper 3 - Agriculture)

Cost of credit: RTI reveals truth of government claim on farm credit

Information accessed by Down To Earth under the Right To Information Act belies the government's claim that banks give farm loans without any service charge or mortgaging farmer's land



By Vivek Mishra
Published: Sunday 30 October 2022

NEXT NEWS >



Key Features:

- It comes with an **ATM-enabled RuPay debit card with facilities for one-time documentation**, built-in cost escalation in the limit, and any number of drawals within the limit.
- The **Card has a validity of 5 years** post which it will be **subject to an annual review**.
- A **loan of Rs.3 lakh can be sanctioned** and produce marketing loans can be obtained
- The farmers eligible for the KCC scheme will **issued a savings account with affordable interest rates**.
- **No collateral** will be required for loans that amount up to Rs. 1.6 lakh
- **For a period of 3 years**, credit will be available and repayment can be made post the harvest season.
- **Fees** and other such as processing fees, land mortgage deed charges etc would be at the **discretion of the issuing bank**.

Context: Information accessed under the Right To Information Act belies the government's claim that banks give farm loans without any service charge or mortgaging farmer's land.

Key points

- India has several Central and state-level schemes offering farm loans, but **almost all agricultural loans for day-to-day crop cultivation are disbursed through KCCs**.
- RBI's says that "processing fee, inspection charges and other charges are decided by banks as per their guidelines".
- Many who already have KCC say they cannot withdraw money since the card is unusable due to non-payment of dues.
- In recent years, **the government's focus has been on distributing KCCs**, especially after the pandemic which saw a sharp rise in agrarian debt in the country.
- Government data shows that the **issuance of KCCs and farm loan waiver have a clear electoral link**.

Kisan Credit Card (KCC)

- **Origin:** It was introduced in 1998 based on a **model scheme prepared by the National Bank for Agriculture and Rural Development (NABARD)**.
 - The scheme was further **extended for the investment credit requirement of farmers** viz. allied and non-farm activities in the year 2004.
 - In the Budget-2018-19, **government announced the extension of the facility of Kisan Credit Card (KCC)** to fisheries and animal husbandry farmers to help them to meet their working capital needs.
- **Objective:** it was brought about with the aim of simplifying the procedure for farmers in getting adequate and timely credit. This would help farmers in the purchases of agriculture inputs such as seeds, fertilizers, pesticides etc.
- **Implementing Agencies:** The scheme is **implemented by Commercial Banks, Small finance banks and cooperatives**.
- **Eligibility & Beneficiaries:** All Farmers – Individuals / Joint borrowers who are owner cultivators.
 - Tenant Farmers, Oral Lessees & Sharecroppers.
 - Self Help Groups (SHGs) or Joint Liability Groups of Farmers including tenant farmers, sharecroppers etc.
- **Interest rates:** The interest rates for KCC is **between 2%-4%**.
 - Government of India implements an interest subvention scheme of 2% for short term crop loans up to Rs. 3 lakh.
 - In addition, the GOI provides interest subvention of 2% and prompt repayment incentive of 3% to the farmers.

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