



Create in India Challenge to Boost Creators' Economy

[Source: PIB](#)

The Union Minister of Information and Broadcasting launched the **first season of the 'Create in India Challenge'** as part of the upcoming **World Audio Visual & Entertainment Summit (WAVES) 2024 in Goa**.

- The challenge features 25 competitions across various creative disciplines like animation, filmmaking, gaming, music, and visual arts, organised by industry associations.
 - This initiative underscores the government's commitment to fostering a robust [creators' economy](#), as recognised by the **Prime Minister through the National Creators Award**.
 - The award seeks to honour outstanding contributions across fields such as storytelling, social change, environmental sustainability, education, and gaming.
- The creators' economy is seen as a **powerful tool to promote India's cultural heritage**, including yoga, traditional medicine, and diverse cuisines, globally.
 - Aligned with the Prime Minister's vision of **'Design in India, Design for the World,'** the initiative aims to **generate 2-3 lakh jobs in the media and entertainment sector** by ensuring talent and skill development and building the necessary infrastructure.
- WAVES 2024, scheduled in November 2024 promises to be a pivotal **platform for industry leaders, innovators, and stakeholders** to converge and shape the future of the media and entertainment sector.

Read more: [Social Media Regulation in India](#)

Registration of Exotic Animals

[Source: PIB](#)

Recently, the **Ministry of Environment, Forest and Climate Change (MoEFCC)** asked people, organisations, and zoos to register any [exotic animals](#) they have that are listed under [Schedule IV](#) of the [Wild Life \(Protection\) Act, 1972 \(Amendment Act, 2022\)](#).

- The registration must be done electronically through the [PARIVESH 2.0 portal](#) and submitted to the [Chief Wildlife Warden](#) of the respective State.

What are the Key Facts About the Exotic Species?

- **About Exotic Animals:**
 - [Exotic species](#) are animal or plant species **moved** from their **original range (location)** to a new one. These species are introduced to a **new location** most often by **people**.

- **Examples of Exotic Animals:**
 - **Ball python** (western Africa), **Iguana** (Central and South America), **Cockatiel** (Australia), **Red-eared slider turtle** (USA and Mexico), **African grey parrot** (Central Africa), **Amazonian parrot** (South and Central America) etc are examples of exotic animals in India.
- **Legal Requirement:**
 - As per the [Living Animal Species \(Reporting and Registration\) Rules, 2024](#), any person possessing a species listed in **Schedule IV** of the **Wild Life (Protection) Act, 1972**, must report and register the species.
 - [Wild Life \(Protection\) Amendment Act, 2022](#) introduced **Section 49 M**, requiring the registration of possession, transfer, birth, and death of species listed in the **CITES Appendices** and **Schedule IV of the Wild Life (Protection) Act, 1972**.
- **Concerns with Exotic Species:**
 - **Non-Regulation:** Exotic species are imported to India and bred in captivity **without proper registration** which may pose a threat of **zoonotic diseases**.
 - **Impending Pandemic:** The [Covid-19 pandemic](#), a zoonotic disease, brought attention to the **dangers** of unregulated trade and ownership of **exotic animals**.
 - **Smuggling of Exotic Animals:** Activists have raised concerns about the increased [smuggling of endangered exotic animals](#) into India from Southeast Asia and other regions.
 - There has been a notable increase in the **seizure** of exotic animals, particularly in **Assam and Mizoram**, where species like **Kangaroos** (Australia), **Koalas** (Australia), and **Lemurs** (Madagascar) have been confiscated and temporarily housed in zoos.

What are the Key Facts About the Wild Life (Protection) Act, 1972 (WPA)?

- **About WPA, 1972:** It aims to protect **wild animals, birds, and plants**, and address related issues to ensure the ecological and **environmental sustainability** of the country.
- **Schedules of WPA, 1972:** The Wildlife (Protection) Act, 1972 has **four schedules** after the **Wild Life (Protection) Amendment Act, 2022**.
 - **Schedule I:** For species that receive the **highest level of protection**. E.g., **Tiger, Elephants, Rhino** etc.
 - **Schedule II:** For species that receive a **lesser degree of protection**. E.g., **Kites, Eagle, Falcons** etc.
 - **Schedule III:** For **plant species**
 - **Schedule IV:** For species **protected** under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (**CITES**). E.g., **Bear**.
 - CITES is an **international agreement** that aims to ensure that international trade in specimens of wild animals and plants **does not threaten the survival** of the species.

What is the PARIVESH 2.0 Portal?

- **About:** PARIVESH 2.0 is a **web-based application** for online **submission and monitoring** of Environmental, Forest, Wildlife, and Coastal Regulation Zone clearances.
 - PARIVESH is an acronym for **Pro-Active and Responsive facilitation by Interactive, Virtuous, and Environmental Single Window Hub**.
- **Ministry:** It has been developed by the **Ministry of Environment, Forest and Climate Change (MoEFCC)**.
- **Function:** It provides a comprehensive **single window solution** for the **administration of all green clearances** and monitors their subsequent compliance across the nation.
 - Process transformation, technology transformation, and domain knowledge intervention are the key drivers behind the framework of the new **PARIVESH 2.0** portal.

WILDLIFE CONSERVATION INITIATIVES

Constitutional Provisions for Wildlife

42nd Amendment

Act, 1976: Forests & Protection of Wild Animals and Birds (moved from State to Concurrent List)

Article

48 A: State shall endeavor to protect & improve environment and safeguard forests and wildlife of country

Article

51 A (g): Fundamental duty to protect & improve natural environment including forests and Wildlife

Legal Frameworks

Wildlife (Protection) Act, 1972

Biological Diversity Act, 2002

Major Conservation Initiatives

Integrated Development of Wildlife Habitats (IDWH):

- ↳ Financial assistance provided to State/UT Governments for protection and conservation of wildlife
- ↳ A Centrally Sponsored Scheme

National Wildlife Action Plan (2017-2031)

Guidelines for Eco-tourism in Protected Areas

Human-Wildlife Conflict Mitigation

Wildlife Crime Control Bureau: To combat wildlife-related crimes

Wildlife Division (MoEFCC):

- ↳ Policy and law for conservation of biodiversity and Protected Area network
- ↳ Technical and financial support to the State/ UTs under IDHW, Central Zoo Authority and Wildlife Institute of India

Wildlife Crime Control Bureau (WCCB):

Collection, collation of intelligence & its dissemination, establishment of centralized Wild Life crime databank, coordination etc.

Wildlife Crime Control:

- ↳ Operation Save Kurma
- ↳ Operation Thunderbird

Species-Specific Initiatives

- ↳ Protection and conservation of Greater Adjutant in Gangetic riverine tract
- ↳ Dolphin Conservation in Non-Protected Area Segment of Ganga River
- ↳ Conservation Breeding Centre for Wild water buffalo (2020)
- ↳ Recovery programme for Snow leopard (2009)
- ↳ Recovery programme for Vultures (2006)
- ↳ Project Elephant (1992)
- ↳ Project Tiger/National Tiger Conservation Authority (NTCA) (1973)

India's Collaboration with Global Wildlife Conservation Efforts

- ↳ Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- ↳ Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- ↳ Convention on Biological Diversity (CBD)
- ↳ World Heritage Convention
- ↳ Ramsar Convention
- ↳ The Wildlife Trade Monitoring Network (TRAFFIC)
- ↳ United Nations Forum on Forests (UNFF)
- ↳ International Whaling Commission (IWC)
- ↳ International Union for Conservation of Nature (IUCN)
- ↳ Global Tiger Forum (GTF)



Drishti IAS

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. If a particular plant species is placed under Schedule VI of the Wildlife Protection Act, 1972, what is the implication? (2020)

- (a) A licence is required to cultivate that plant.
- (b) Such a plant cannot be cultivated under any circumstances.
- (c) It is a Genetically Modified crop plant.
- (d) Such a plant is invasive and harmful to the ecosystem.

Ans: (a)

Q. In India, if a species of tortoise is declared protected under Schedule I of the Wildlife (Protection) Act, 1972, what does it imply? (2017)

- (a) It enjoys the same level of protection as the tiger.
- (b) It no longer exists in the wild, a few individuals are under captive protection; and now it is impossible to prevent its extinction.
- (c) It is endemic to a particular region of India.
- (d) Both (b) and (c) stated above are correct in this context.

Ans: (a)

Q. A sandy and saline area is the natural habitat of an Indian animal species. The animal has no predators in that area but its existence is threatened due to the destruction of its habitat. Which one of the following could be that animal? (2011)

- (a) Indian wild buffalo
- (b) Indian wild ass
- (c) Indian wild boar
- (d) Indian gazelle

Ans: (b)

Waterspout

[Source: IE](#)

Why in News?

Recently, a **luxury yacht sank** after being struck **by a violent storm off the coast of Sicily, Italy**. Experts believe the storm may have been a **waterspout**, which is a **tornado-like phenomenon that forms over water**.

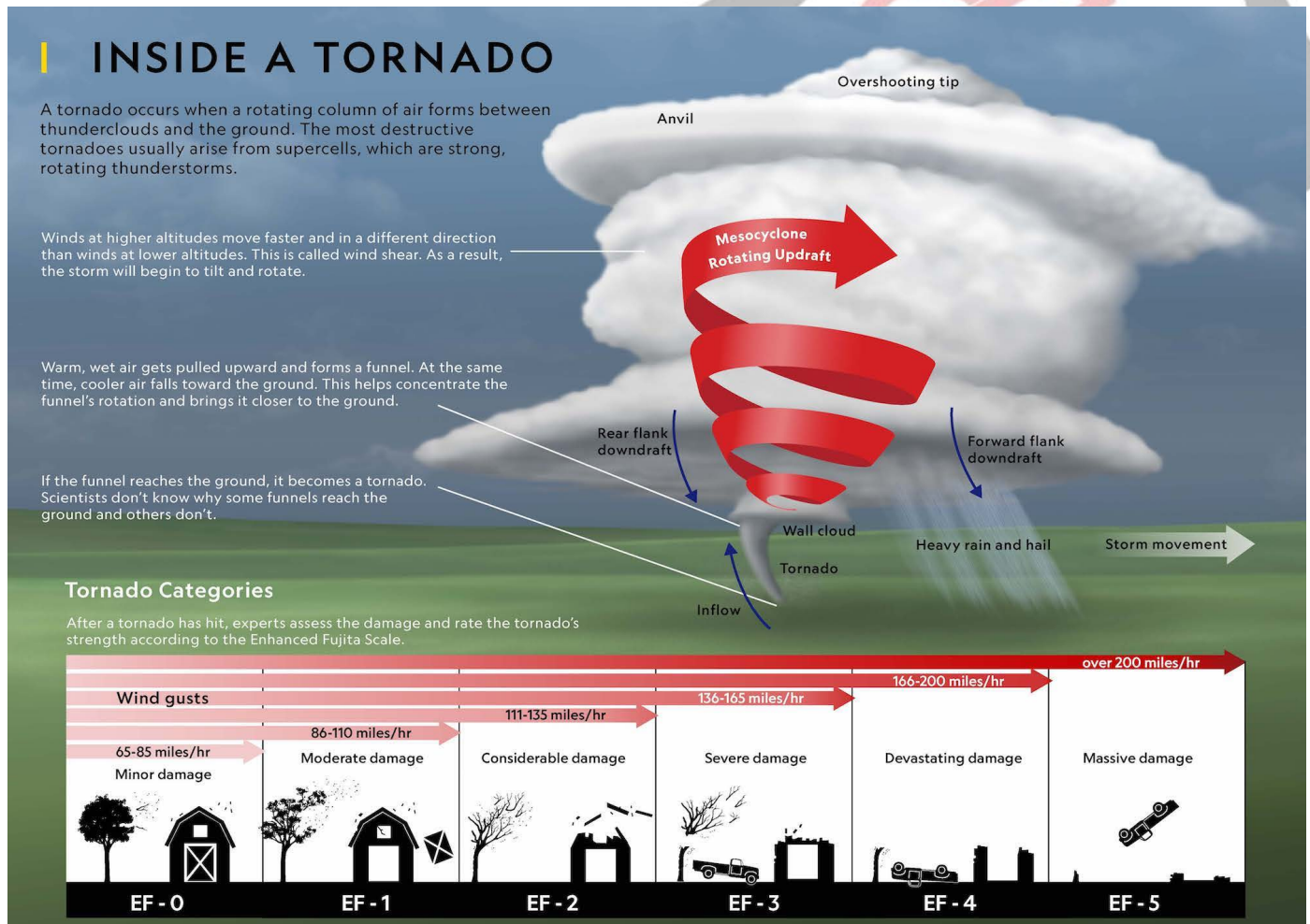
What is a Waterspout?

▪ About:

- A waterspout is a **rotating column of air and mist that forms over a body of water**. It is **less intense than tornadoes** and usually persists for about 5-10 minutes.
- On average, a waterspout has a **diameter of approximately 165 feet** and **wind speeds reaching 100 kilometers per hour**.

▪ Types of Waterspouts:

- **Tornadic Waterspouts:** They are tornadoes that either develop over water or move from land to water.
 - As per [National Oceanic and Atmospheric Administration \(NOAA\)](#), they are **linked to severe thunderstorms** and are often **accompanied by strong winds, rough seas, large hail, and frequent dangerous lightning**.
 - Tornadic waterspouts can be significant in size and **capable of causing substantial destruction**.
- **Fair-Weather Waterspouts:** This type of waterspouts are far more common and **form exclusively over water**.
 - They develop during calm weather conditions and are typically smaller and **less dangerous than tornadic waterspouts**.



Cyclones are given different names in different regions of the world:

- **Typhoons:** In the China Sea and Pacific Ocean
- **Hurricanes:** In the West Indian islands in the Caribbean Sea and Atlantic Ocean
- **Tornadoes:** In the Guinea lands of West Africa and southern USA

- **Willy-willies:** In north-western Australia
- **Tropical cyclones:** In the Indian Ocean

Sicily

- Sicily is the largest island in the **Mediterranean Sea**, located off the **southern Italian peninsula**.
- It is **part of an autonomous region of Italy**, along with the Egadi, Lipari, Pelagie, and Panteleria islands.
- The **capital of Sicily is Palermo**, which is also the largest city on the island.



UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. "Each day is more or less the same, the morning is clear and bright with a sea breeze; as the Sun climbs high in the sky, heat mounts up, dark clouds form, then rain comes with thunder and lightning. But rain is soon over." (2015)

Which of the following regions is described in the above passage?

- (a) Savannah
- (b) Equatorial
- (c) Monsoon
- (d) Mediterranean

Nanotechnology in Drug Delivery

[Source: PIB](#)

A new **drug delivery** method has been developed that can prove useful to patients suffering from asthma, cystic fibrosis, [human immunodeficiency virus \(HIV\)](#), cancer, or those exposed to corticosteroid medications for an extended duration.

- Scientists have used a **chitin** synthesis fungicide, **Nikkomycin**, to develop Nikkomycin-loaded **polymeric nanoparticles**. Nikkomycin is produced by the bacterial *Streptomyces* spp.

Chitin

- **Chitin** is a **strong, natural material** found in the **outer shells** of **insects, crabs, lobsters**, and other [arthropods](#), as well as in the **cell walls of fungi** but **not** found in the **human body**.
- It's made up of long chains of **glucose molecules**, similar to **cellulose** in **plants**.
- Chitin provides structural **support and protection**, acting like a tough armour for these organisms.
- In insects and crustaceans, it forms a **hard exoskeleton** that helps them keep their shape and defend against predators.
- In **fungi**, chitin strengthens the **cell walls**, helping the organism maintain its **form** and protect itself from **environmental stress**.

What are Key Facts about Nano Drug Delivery?

- **About Nanotechnology:** [Nanotechnology](#) is the science of designing, producing, and using systems by manipulating atoms and molecules at the **nanoscale** i.e. having **one or more dimensions** of the particle of **100 nanometres or less**.
- **Nano Drug Delivery:** It involves **delivering drugs** to a specific **target site**.
 - **Nanoparticles can entrap drugs or biomolecules** into their interior structures and/or absorb drugs onto their exterior surfaces to deliver drugs at a designated site in the body.
- **Recent Development in Nano Drug Delivery:** Nikkomycin-loaded polymeric nanoparticles were found to disrupt the growth of **Aspergillus spp** and were found effective against fungal infection known as [Aspergillosis](#).
- **Significance:** The use of polymeric nanoparticles is the **most advanced** method of drug delivery.
 - The resistance to the existing [Azole drugs \(antifungal drugs\)](#) is a matter of concern and hence we need better methods of drug delivery for effective medication.
- **Future Prospects:** It can help in the development of inhalation **nanoformulations** against **pulmonary aspergillosis**.
 - Scientists are optimistic about expanding antifungal nanoformulations and exploring [public-private partnerships](#) for future commercialization.

What is the Role of Nanotechnology in the Healthcare Sector?

- **Precision Medicine:** Nanoparticles are engineered to deliver drugs directly to disease sites

like **cancer cells**, reducing the damage to healthy tissues. e.g., **liposomes**, a type of nanoparticle, are used to deliver **chemotherapy drugs** more precisely, minimising side effects.

- Nanoparticles are being investigated for their ability to improve **vaccine efficacy** by delivering antigens directly to **immune cells**

- **Improved Diagnostics and Imaging: Gold nanoparticles** are used as probes for detecting specific **DNA or RNA sequences**, enhancing the sensitivity and accuracy of diagnostic tests.
- **Regenerative Medicine:** Nanomaterials are used to create scaffolds that mimic the **structure of bone**, promoting the growth of new bone **tissue** in patients with fractures or bone loss.
- **Gene Therapy:** Advanced nanopore technologies are being developed for **gene sequencing**, allowing for rapid, low-cost, and accurate **DNA analysis**.
- **Antimicrobial Treatments:** Silver nanoparticles are incorporated into wound dressings and **coatings for medical devices to prevent infections** due to their strong antimicrobial properties.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. With reference to the use of nanotechnology in health sector, which of the following statements is/are correct? (2015)

1. Targeted drug delivery is made possible by nanotechnology.
2. Nanotechnology can largely contribute to gene therapy.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (c)

Q. With reference to carbon nanotubes, consider the following statements: (2020)

1. They can be used as carriers of drugs and antigens in the human body.
2. They can be made into artificial blood capillaries for an injured part of the human body.
3. They can be used in biochemical sensors.
4. Carbon nanotubes are biodegradable.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2, 3 and 4 only
- (c) 1, 3 and 4 only
- (d) 1, 2, 3 and 4

Ans: (c)

Q. There is some concern regarding the nanoparticles of some chemical elements that are used by the industry in the manufacture of various products. Why? (2014)

1. They can accumulate in the environment, and contaminate water and soil.
2. They can enter the food chains.
3. They can trigger the production of free radicals.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (d)

Revamping Crop Data Collection by E-technology

For Prelims: [Digital Crop Survey and Digital General Crop Estimation Survey \(DGCES\)](#), [Remote Sensing](#), [Crop Maps](#), [Crop Surveys](#), [Agricultural Regions](#), [Geotagging](#), [GPS](#), [Space Application Centre](#), [Indian Agricultural Research Institute](#), [National Sample Survey Office](#), [Digital Skills](#), [NGOs](#), [World Census of Agriculture \(WCA\)](#), [Food and Agriculture Organization \(FAO\)](#)

For Mains: Significance and Need of Updated Crop Estimation Data in Policy Making.

[Source: TH](#)

Why in News?

Recently, the Union government urged states to swiftly adopt and implement the **Digital General Crop Estimation Survey (DGCES)**, **Digital Crop Survey** and **Revamped FASAL Programme** to improve [farm production estimates](#) and enhance data accuracy.

- It aims to enhance the **accuracy, reliability and transparency** of agricultural statistics which will help in policy formulation, trade decisions and agricultural planning.

What are the New Initiatives Launched for Revamping Crop Data Collection?

- **Digital General Crop Estimation Survey (DGCES):** It is a nationwide initiative that uses a **mobile app and web portal** to assess crop yields and improve agricultural practices in India.
 - It aims to calculate yield based on scientifically designed **crop cutting experiments** for all major crops across the country.
 - It includes features such as **GPS-enabled photo capture, automated plot selection, and geo-referencing** to enhance transparency and accuracy.
- **Digital Crop Survey:** It is a technology-driven initiative designed to provide detailed and accurate crop data through **digital means**.
 - It aims to enhance the **precision of crop area** estimation and other related agricultural statistics.
 - **Key Features Include:**

- **Geotagged Data:** Uses [geotagging](#) to record the exact locations of crop plots, ensuring accurate area measurement.
- **Digital Documentation:** Employs digital tools and platforms for data collection, reducing reliance on manual methods.
- **Real-Time Updates:** Provides near **real-time information** about crop areas, allowing for more timely and accurate assessments.
- **Revamped FASAL Programme:** [Forecasting Agricultural output using Space, Agro-meteorology and Land based observations \(FASAL\)](#) leverages **remote sensing** technology to generate accurate crop maps and area estimation for major crops.
 - **Mahalanobis National Crop Forecast Centre (MNCFC)** of the Department of Agriculture & Farmers' Welfare regularly generates **crop forecasts** at the District/State/National level for major crops.
- **Unified Portal for Agricultural Statistics (UPAg Portal):** The [UPAg Portal](#) serves as a **centralised hub** for near real-time information on crop production, market trends, pricing, and other vital agricultural data.
 - It allows for the **cross-verification** of data from multiple sources, ensuring robust agricultural statistics.
- **Yield Forecast Model:** The Ministry of Agriculture & Farmers Welfare is collaborating with various institutions, including the [Space Application Centre](#) and the [Indian Agricultural Research Institute](#), to develop yield forecast models.
- **Supervision:** The Ministry of Agriculture & Farmers Welfare is working with the **Ministry of Statistics and Programme Implementation** to increase the supervision of crop-cutting experiments by the [National Sample Survey Office](#).

What is the Need for a New Mechanism to Collect Crop Data?

- **Real-Time Monitoring:** Conventional methods may not provide **timely updates** on crop conditions and **production estimates**.
 - In the event of unexpected weather conditions or pest outbreaks, **real-time data** is **crucial** for timely intervention and [accurate assessment](#).
- **Integration of Advanced Technologies:** Lack of integration with modern technologies limits the effectiveness of current data collection methods.
 - The [Digital Crop Survey and Digital General Crop Estimation Survey \(DGCES\)](#) leverages advanced technology to provide [geotagged](#), plot-level data, which enhances precision.
- **Enhancing Data Reliability:** Initiatives and programs that use [remote sensing](#) can create accurate [crop maps](#), reducing reliance on manual data collection and enhancing data consistency.
- **Facilitating Policy-Making:** Accurate and timely data from new initiatives like [Digital Crop Surveys](#) help policymakers make **informed decisions** about resource allocation and support measures like [Public Distribution System](#), [food security](#) etc.
- **Addressing Climate Impacts:** [Climate change](#) affects crop production, and traditional methods may struggle to keep up with the changing conditions.
 - Advanced technologies like satellite imagery can quickly offer better data for adjusting farming practices e.g., **advance warning** in case of [locust attack](#).
- **Handling Large-Scale Data:** In India, estimating crop production across vast and [diverse agricultural regions](#) can be easier using digital technologies.

Agriculture Census and Livestock Census

- **Agriculture Census:** The **Ministry of Agriculture & Farmers Welfare** conducts [agriculture census](#) to gather crucial data on the agricultural sector.
 - The census follows the decennial [World Census of Agriculture \(WCA\)](#) guidelines set by the [Food and Agriculture Organization \(FAO\)](#) of the [United Nations](#).
 - Data is classified by different size classes (**marginal, small, semi-medium, medium, and large**) and social groups, including [Scheduled Castes](#) and [Scheduled Tribes](#).
 - The Agriculture Census is carried out once in **five years**.
 - So far, **ten Agriculture Censuses** have been conducted in the country since **1970-71** and the current Agriculture Census with the reference

year **2021-22** is the **eleventh** in the series.

- **Livestock Census: The Ministry of Fisheries, Animal Husbandry & Dairying** conducts [livestock census](#) once every **5 years**.
 - The Livestock Census covers **all domesticated animals**.
 - It has been conducted periodically since **1919-20**. So far **20** such censuses have been conducted with the **20th** one conducted in **2019**.

What are the Challenges Involved in the Adoption of New Tech Initiatives for Farm Data Collection?

- **Lack of Digital Infrastructure: Inadequate** infrastructure like **the cloud for data storage and data processing skills** of public officials hampers the use of digital technology in agriculture.
- **Limited Access to Technology:** Smallholder farmers **often lack access to technology** and the necessary [digital skills](#) which hinders adoption of digital tools and limits data generation.
- **Data Accuracy and Reliability:** Concerns remain about the **accuracy and reliability** of data collected through new technologies.
 - **Inaccurate data collection tools may lead to poor decision-making** and decreased trust in digital systems.
- **Integration with Existing Systems:** New data collection tools may not seamlessly integrate with traditional systems, causing **data management issues**. It may complicate the adoption process and can lead to inefficiencies.
 - In traditional systems, crop data are in **regional language and local script**. Converting them into **multiple languages** for universal access and uploading them correctly on [cloud storage](#) is a tiring process.

Way Forward

- **Improve Technical Skills:** Partner with agricultural extension services e.g., [Krishi Vigyan Kendras \(KVKs\)](#), [NGOs](#), and tech companies to deliver training. Offer workshops, online courses, and **hands-on demonstrations**.
- **Facilitate Integration with Existing Systems:** Ensure new technologies are compatible with existing **farm management systems** for a seamless experience for users.
- **Regular Audits and Validation:** Conduct periodic audits and cross-checks of the collected data to identify discrepancies and ensure its reliability.

Drishti Mains Question:

Q. What is the need for real-time crop data estimation in an economy? Discuss the challenges persisting in the adoption of digital technologies for crop estimation.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. In the context of India, which of the following is/are considered to be practice(s) of eco-friendly agriculture? (2020)

1. Crop diversification
2. Legume intensification
3. Tensiometer use
4. Vertical farming

Select the correct answer using the code given below:

- (a) 1, 2 and 3 only
- (b) 3 only
- (c) 4 only
- (d) 1, 2, 3 and 4

Ans: (a)

Q. An objective of the National Food Security Mission is to increase the production of certain crops through area expansion and productivity enhancement in a sustainable manner in the identified districts of the country. What are those crops? (2010)

- (a) Rice and wheat only
- (b) Rice, wheat and pulses only
- (c) Rice, wheat, pulses and oil seeds only
- (d) Rice, wheat, pulses, oil seeds and vegetables

Ans: (b)

Mains

Q. What are the present challenges before crop diversification? How do emerging technologies provide an opportunity for crop diversification? (2021)

Q. Why did the Green Revolution in India virtually by-pass the eastern region despite fertile soil and good availability of water? (2014)

NCGG Concludes Advanced Leadership Development Program

Source: PIB

The **National Centre for Good Governance (NCGG)** has recently held the inaugural session of the **Advanced Leadership Development Program on Public Policy and Governance for Civil Servants of FIPIC/IORA countries** in August 2024.

- It was attended by 40 civil servants from 11 countries, including Seychelles, Somalia, and South Africa, reinforcing India's commitment to **global governance** improvement and collaboration in **public policy**.
- It discussed themes such as **geopolitical potential, cyber security, and public-private partnerships**.

National Centre for Good Governance (NCGG):

- It is an **autonomous institute** under the **Department of Administrative Reforms and Public Grievances**, Government of India.

- NCGG promotes good governance by conducting **national and international training**, carrying out **governance-related studies**, **organizing workshops and consultations**, and undertaking **initiatives focused on citizen-centric governance**.
- It has its head office in **New Delhi** and a registered office in Mussoorie.
- It was established in 2014 by upgrading the **National Institute of Administrative Research (NIAR)**, which was part of the **Lal Bahadur Shastri National Academy of Administration (LBSNAA)**, the IAS training academy in Mussoorie.

Read more: [Capacity Building Programme](#)

India Targets Doubling Trade with Africa by 2030

For Prelims: [Confederation of Indian Industry](#), [International Solar Alliance](#), [PM Gati Shakti](#), [African Continental Free Trade Area](#), [World Trade Organisation](#), [African Union](#), [Mediterranean Sea](#)

For Mains: India-Africa Trade Partnership: Achievements, Challenges, [African Continental Free Trade Area](#)

Source: [HT](#)

Why in News?

Recently at the **19th India-Africa Business Conclave**, organised by the [Confederation of Indian Industry \(CII\)](#) in New Delhi India has unveiled an ambitious plan to **double its exports to African countries to USD 200 billion by 2030**.

- This strategic push is aimed at bolstering economic ties and addressing mutual challenges and opportunities.

How will India Double its Exports to African Countries?

- **Targeting High-Growth Sectors:**
 - **Agriculture and Agro-Products:** Indian companies are poised to help Africa enhance its **food production capacity** by sharing advanced [seed technologies](#), agro-processing methods, and setting up incubation centers.
 - India can **significantly enhance Africa's food security** by technology transfer, and expanding **bilateral trade which reached USD 100 billion in 2022**.
 - **Pharmaceuticals:** With pharmaceutical exports to Africa already at **USD 3.8 billion in 2023**, there is significant potential for growth as India can provide affordable medicines and healthcare solutions.
 - **Automobiles:** India aims to expand its automobile exports by tapping into Africa's growing demand for vehicles, particularly two-wheelers and affordable cars.
 - **Renewable Energy:** India and Africa are uniquely positioned to lead in [renewable energy](#), particularly [solar power](#). The vision of ["One World, One Grid"](#) aims to connect energy grids overland and underwater.
 - **India's expertise in solar energy, wind power**, and energy-efficient solutions found resonance in Africa's pursuit of sustainable energy sources.
 - More than 20 African countries are participating in the [International Solar Alliance \(ISA\)](#), reflecting a strong commitment to renewable energy collaboration.

- **Logistics and Transportation:** Improvements in logistics and transportation infrastructure are seen as crucial for **facilitating smoother trade flows** between India and African nations.
 - India plans to share its [PM Gati Shakti master plan](#) and [Unified Logistics Interface Portal \(ULIP\)](#) with Africa to support the development of efficient logistics infrastructure and multimodal connectivity.
 - The [African Continental Free Trade Area \(AfCFTA\)](#) has identified automobiles and logistics as areas with substantial potential for collaboration between India and Africa.
 - The AfCFTA is a **free trade agreement designed to facilitate duty-free trade within Africa**. It aims to eliminate tariffs and non-tariff barriers among member states while promoting the free movement of goods, services, and people.
 - This initiative is part of **Africa's Development Framework Agenda 2063**, which envisions a unified economic market across the continent.
 - India's current trade with Africa includes a wide range of products, from crude oil to chemicals and textiles. The **AfCFTA's push towards trade diversification and value addition** can align well with India's export interests and investment strategies.
- **Unified Approach to WTO Reforms:** India has called for a unified African stance on [World Trade Organisation \(WTO\) reforms](#), particularly in areas such as food security, agriculture, and technology transfer.
 - A coordinated approach is essential to push through necessary changes in the global trade environment, which has become increasingly protectionist.
- **Duty-Free Tariff Preference and FTAs:** India extends Duty-Free Tariff Preference (DFTP) to 27 Least Developed Countries (LDCs) in Africa on a non-reciprocal basis.
 - The DFTP Scheme by India **grants tariff preferences on imports to India from the LDCs**, which are developing countries with the lowest socioeconomic indicators.
 - **Additionally, India is keen to explore new Free Trade Agreements (FTAs) with African nations, including South Africa, to boost trade volumes and diversify the range of goods exchanged.**
- **Strategic Cooperation:**
 - **Support for African Union:** India has been instrumental in advocating for the [African Union's full membership in the G20](#), further solidifying its commitment to elevating African voices on the global stage.
 - **Special Economic Zones (SEZs):** India encourages its investors to establish strong footprints in Africa's manufacturing zones and considers expanding SEZs as a means of deepening economic ties.
 - **Global South Representation:** India aims to be a leading voice for the [Global South](#), advocating for **equitable and inclusive growth at multilateral forums**, aligning with the broader goal of strengthening the geopolitical and **economic position of developing nations, including those in Africa.**

What are the Current Trends in India-Africa Trade

- **Trade Figures: Bilateral trade between India and Africa grew by 9.26% in FY 2022-23, reaching nearly USD 100 billion.** Exports were valued at USD 51.2 billion, and imports at USD 46.65 billion.
 - **In FY24, India exported goods worth USD 38.17 billion** to African countries, with key destinations including Nigeria, South Africa, and Tanzania.
 - Major exports included petroleum products, engineering goods, pharmaceuticals, rice, and textiles.
 - The [African Union](#) is India's fourth-largest trading partner, following the United States, China, and the United Arab Emirates.
 - Within the African Union, **Nigeria is India's top trading partner**, accounting for 20.91% of trade.
- **Import Composition:** India's imports from Africa are primarily dominated by primary products and natural resources. **The top imports include:**
 - **Fuels:** Making up 61% of imports, primarily crude oil from Nigeria, Angola, and Algeria.
 - **Precious Stones and Glass:** Accounting for 20%, sourced from Ghana, South Africa, and Botswana.

- **Vegetables, Metals, and Minerals:** Sourced from various African countries including Benin, Sudan, Zambia, South Africa, Morocco, and Côte d'Ivoire.
- **Export Composition:**
 - **Fuels:** 20%, including non-crude petroleum oil to countries such as Mozambique, Togo, Tanzania, Kenya, and South Africa.
 - **Chemicals:** 18.5%, including pharmaceuticals to Nigeria, Egypt, and Kenya.
 - **Machines and Electricals:** 12.59%, exported to Nigeria, South Africa, and Egypt.
- **Economic Investments:** India has **invested over USD 12.37 billion in 206 infrastructure** projects across 43 African countries, which has positively impacted millions of lives.

Key Facts About Africa

- **Geography:** Africa is bordered by the **Mediterranean Sea (north), Red Sea (north-east), Indian Ocean (east) and Atlantic Ocean (west)**, and is divided almost equally by the Equator.
 - It has **eight major physical regions** like the Sahara, Sahel, Ethiopian Highlands, savannas, Swahili Coast, rainforests, the African Great Lakes, and Southern Africa.
- **Population:** Africa is the **second-most populous continent after Asia**.
- **Economy:** Agriculture employs 65-70% of Africa's labour force and accounts for 30-40% of its **Gross Domestic Product (GDP)**. The continent has a diverse economic base with significant contributions from sectors like mining and tourism.
- **Demographics:** By 2034, **Africa is expected to have the world's largest working-age population of 1.1 billion**. The continent's population is projected to double in the next 35 years, reaching nearly 2.4 billion people, with a significant increase in the under-18 population.
- **Climate:** Africa is the world's **hottest continent**. It has diverse climates, from the Sahara's arid conditions to lush rainforests.
- **Highest Point: Kilimanjaro, Tanzania.**
- **Trade: China is Africa's top trade partner**, with Sino-African trade volumes nearing USD 200 billion per year. Angola alone has a large population of Chinese residents.
- **Gold and Minerals:** Africa's two most profitable mineral resources are **gold and diamonds**. In 2021, Africa produced 680.3 metric tons of gold (with Witwatersrand, South Africa, being a major gold-producing region), and dominated the global diamond market, **producing around 65% of the world's diamonds by value each year**.
 - Petroleum and coal are among the most abundant minerals for 22 out of Africa's 54 countries.



What are the Challenges for India-Africa Trade?

- **Addressing Non-Tariff Barriers:** India's agricultural exports face significant hurdles due to the [European Union's](#) stringent food safety standards, which limit exports of products like chilies, tea, basmati rice, and others.
 - These regulations not only affect India's trade with the EU but also indirectly **impact its trade with African nations, especially those that align with EU standards.**
 - By advocating for relaxed standards, India can facilitate smoother trade flows, **reduce compliance costs, and enhance the competitiveness** of its agricultural exports in both

the European and African markets.

- **WTO Reforms for Developing Nations:** The [13th WTO Ministerial Conference](#) highlighted the **inability to achieve consensus** on key issues such as agriculture, technology transfer, and food security.
 - This lack of agreement affects global trade policies and negotiations, directly impacting developing nations, including those in Africa.
 - The failure to reform agricultural subsidies and tariffs at the WTO hampers **African countries' ability to compete globally and limits fair trade**, affecting India as a major trade partner by imposing barriers on agricultural exports to Africa.
 - Additionally, unresolved WTO issues on quality standards and trade practices can **damage the reputation of Indian products** in African markets, impacting their **perception and competitiveness compared to China**.
- **Debt Concerns:** The rising debt ratios in **sub-Saharan Africa have nearly doubled in the past decade**.
 - The [International Monetary Fund \(IMF\)](#) has highlighted these concerns, noting that the **escalating debt burden is creating economic instability** in the region.
 - Due to their debt-ridden economy, many low-income countries in sub-Saharan Africa are at high risk of or already experiencing debt distress as of 2022, presenting a significant challenge for India-Africa trade.
- **Chinese Influence:** China's role as the **largest single-country trading partner for sub-Saharan Africa** introduces additional challenges.
 - China's dominance in **purchasing a substantial portion of the region's exports** and providing manufactured goods and machinery has established a significant economic footprint.
 - However, this relationship is marred by **criticism regarding the use of debt trap diplomacy and the lack of standardisation** in public debt documentation.
 - These factors create an uneven playing field for other trade partners like India, impacting the dynamics of India-Africa trade.

Way Forward

- **Trade Agreements:** India has a history of preferential trade agreements with African nations, including the [India-Mauritius Comprehensive Economic Cooperation and Partnership Agreement \(CECPA\)](#). Expanding and deepening such agreements will be crucial for increasing trade volumes.
- **Investing in African SMEs:** [Small and medium enterprises \(SMEs\)](#) account for nearly 80% of employment in Africa. By providing access to low-cost raw materials and inputs, **India can foster the growth of African SMEs**, which will, in turn, create new opportunities for Indian exports.
- **Critical Minerals:** **India-Africa trade can leverage [Africa's rich deposits of critical minerals](#), such as cobalt, copper, lithium, nickel, and rare earths, which are essential for India's green energy transition.**
 - These minerals can be used in the manufacturing of [electric vehicles \(EVs\)](#) and other renewable energy technologies, positioning Africa as a key supplier to Indian industries.
 - This partnership can enable India and Africa to drive mutual benefits and bolster their positions in the green energy sector.
- **Digital Innovations:** [India's Startup Revolution](#) and [digital public infrastructure](#), such as [Unified Payment Interface \(UPI\)](#), and [Open Network for Digital Commerce \(ONDC\)](#), can enhance the [Ease of Doing Business](#) and quality of life in Africa and enhance trade with India.

Drishti Mains Question:

Q. Examine the potential benefits and challenges of India's plan to double its exports to Africa by 2030. How can this initiative influence India's economic position globally?

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. Consider the following statements: (2016)

The India-Africa Summit

1. held in 2015 was the third such Summit
2. was actually initiated by Jawaharlal Nehru in 1951

Which of the statements given above is/are correct?

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Ans: (a)

Exp:

- India-Africa Summit is a forum to re-initiate and reboot relation between India and African countries.
- It started from 2008 with New Delhi as its first venue. Since then, the summit has been held every three years, alternately in India and Africa. **Hence, statement 2 is not correct.**
- The second summit was held in Addis Ababa in 2011. The third summit, scheduled to be held in 2014, was postponed because of the Ebola outbreak, and took place in October, 2015 in New Delhi. **Hence, statement 1 is correct.**
- **Therefore, option (a) is the correct answer.**

Mains

Q. How does India see its place in the economic space of rising natural resource rich Africa? (2014)

Q. Increasing interest of India in Africa has its pro and cons. Critically Examine. (2015)