



India's Evolving Carbon Market

For Prelims: Carbon Credit Market, NDCs, GHG, Kyoto Protocol, Net Zero, PLI Scheme, Energy Conservation.

For Mains: India's Evolving Carbon Market and its Significance.

Why in News?

- The Ministry for Power, New & Renewable Energy is taking steps to establish a **Carbon Credit Market** to help the country meet its [Nationally Determined Contributions \(NDC\)](#).

What are the Carbon Markets?

▪ Carbon Credits:

- A carbon credit (also known as carbon offset) is a **credit for greenhouse emissions reduced or removed from the atmosphere** by an emission reduction project, which can be used by governments, industry, or private individuals to compensate for the emissions they generate elsewhere.
- Those that cannot easily reduce emissions can still operate, at a higher financial cost.
- Carbon credits are based on the "**cap-and-trade**" model that was used to reduce sulfur pollution in the 1990s.
- One carbon credit is **equal to one metric ton of carbon dioxide**, or in some markets, carbon dioxide equivalent gases (CO₂-eq).
- Negotiators at the Glasgow COP26 climate change summit in November 2021 agreed to create a global carbon credit offset trading market.
 - The [Kyoto Protocol](#) provides for three mechanisms that enable countries, or operators in developed countries, **to acquire greenhouse gas reduction credits**:
 - Under Joint Implementation (JI), a developed country with relatively high costs of domestic greenhouse reduction would set up a project in another developed country.
 - Under the **Clean Development Mechanism (CDM)**, a developed country can **"sponsor" a greenhouse gas reduction project in a developing country** where the cost of greenhouse gas reduction project activities is usually much lower, but the atmospheric effect is globally equivalent. The developed country would be given credits for meeting its emission reduction targets, while the developing country would receive the capital investment and clean technology or beneficial change in land use.
 - Under **International Emissions Trading (IET)**, countries **can trade** in the international carbon credit market to **cover their shortfall** in Assigned Amount Units (AAUs). Countries with surplus units can sell them to countries that are exceeding their emission targets under Annex B of the Kyoto Protocol.

▪ Carbon Markets:

- A carbon market **turns emission reductions and removals into tradeable assets**, thus creating incentives to reduce emissions or **improve energy efficiency**. The carbon

- markets can be compliance and voluntary.
- Carbon trading started formally in 1997 under the **United Nations' Kyoto Protocol on climate change** which had more than 150 nation signatories.
 - Parties with commitments under the agreement agreed to limit or reduce their greenhouse gas emissions between 2008 - 2012 to 5.4% which were well below the levels of 1990.
 - Emissions trading, as set out in the Kyoto Protocol, allowed **countries to sell the excess capacity of emission units** to countries that had levels well over their targets.

What is the Significance of Carbon Markets?

- Carbon markets will **open up new avenues for organizations** that are engaged in developing, trading and consulting carbon credits, while stunting the growth of fossil-fuel generation capacities.
- Carbon credits will help developing countries like **India carry out economic activities, while keeping the country's carbon goals in perspective.**
 - In 2021, the global carbon credits market rose by 164 % and is expected to cross USD 100 billion by 2030.
- Carbon credits offer a way **to reward the industries and other sectors** that have developed practices involving technological innovations to reduce emissions and achieve climate targets.
- Carbon markets will play a key role in the **drive towards decarbonisation, encouraging the reduction of emissions through various schemes** in the short term with an ultimate goal of achieving **Net Zero** in the long term.
- Carbon markets are one of the most effective drivers of reducing emissions, offering the lowest-cost emission reductions and enabling India to avert a loss of USD 35 trillion.

What are the Indian Emission Targets?

- India **submitted its updated NDCs** under the Paris Agreement to the United Nations Framework Convention on Climate Change (UNFCCC) in August 2022, in which it stressed the fact that it is a step ahead in achieving the long-term goal of **Net Zero in 2070.**
- Under the updated NDCs, India is committed to reducing the emissions intensity of its gross domestic products by **45 % from 2005 levels by 2030 and achieving 50 %** of its cumulative electric power installed capacity from non-fossil fuel sources of energy by 2030.
- The country is working on expanding its supply chain in the solar manufacturing division.

What are the Related Indian Initiatives?

- **PLI Scheme:**
 - Diversification of the supply chain by introducing a production linked incentive scheme for the **manufacturing of polysilicon cells into modules.**
- **Clean Development Mechanism:**
 - In India, the clean development mechanism under the Kyoto Protocol provided a primary carbon market for the players.
 - The secondary carbon market is covered by the **perform-achieve-trade** scheme (which falls under the energy efficiency category) and the renewable energy certificate.
- **Energy Conservation (Amendment) Bill, 2022:**
 - Empowers the Centre to specify norms and standards of energy efficiency for appliances, industrial equipment and buildings with a connected load over 100 kiloWatts (kW) or a contractual demand of more than 120 kilovolt-amperes (kVA).

Way Forward

- India is on the path to establishing a carbon market at the national level beginning with the voluntary carbon market and then moving on to a compliance-based market.
- The effects of climate change reduction should be favorable to sectors such as renewable energy, energy efficiency, transportation, waste, afforestation and reforestation.
- The carbon credits market favoured by appropriate regulations and policy will help in the creation of suitable opportunities for the next decade.

UPSC Civil Services Examination Previous Year Question:

Prelims

Q. The concept of carbon credit originated from which one of the following? (2009)

- (a) Earth Summit, Rio de Janeiro
- (b) Kyoto Protocol
- (c) Montreal Protocol
- (d) G-8 Summit, Heiligendamm

Ans: (b)

Q. Regarding “carbon credits”, which one of the following statements is not correct? (2011)

- (a) The carbon credit system was ratified in conjunction with the Kyoto Protocol
- (b) Carbon credits are awarded to countries or groups that have reduced greenhouse gases below their emission quota
- (c) The goal of the carbon credit system is to limit the increase of carbon dioxide emission
- (d) Carbon credits are traded at a price fixed from time to time by the United Nations Environment Programme.

Ans: (d)

Mains

Q. Should the pursuit of carbon credits and clean development mechanisms set up under UNFCCC be maintained even though there has been a massive slide in the value of a carbon credit? Discuss with respect to India’s energy needs for economic growth. **(2014)**

Q. Discuss global warming and mention its effects on the global climate. Explain the control measures to bring down the level of greenhouse gases which cause global warming, in the light of the Kyoto Protocol, 1997. **(2022)**

[Source: DTE](#)

Social Media and Elections

For Prelims: Chief Election Commissioner, Election Commission of India

For Mains: Social Media and Role of Elections

Why in News?

Recently, the [Chief Election Commissioner](#) addressed an international conference for Election Management Bodies (EMBs) hosted by the [Election Commission of India \(ECI\)](#) under the aegis of the United States’ ‘Summit for Democracy’ platform.

- While inaugurating the conference, the **commissioner urged social media sites to use their**

"algorithm power" to flag fake news proactively.

What are the Concerns Regarding the Spread of False Information?

- **Red-Herring:** The content moderation-driven approach to disinformation by all major social media platforms is a red herring **designed to distract from the far larger problem of amplified distribution of disinformation as part of business models.**
- **Opacity of Social Media Platforms:** Social media platforms are increasingly becoming the primary ground for public discourse over **which a handful of individuals have inordinate control.**
 - One of the biggest hurdles in being able to curb misinformation is the lack of transparency by social media platforms.
- **Inadequate Measures:** Various social media platforms have been **unable to evolve a coherent framework to stop misinformation** and have instead responded erratically to events and public pressure.
- The absence of a uniform baseline approach, enforcement, and accountability vitiates the information ecosystem.
- **Weaponization of False Information:** Social media platforms have **adopted design choices that have led to a mainstreaming of misinformation** while allowing themselves to be weaponized by powerful vested interests for political and commercial benefit.
 - The consequent free flow of disinformation, hate and targeted intimidation has led to real-world harm and degradation of democracy in India.
 - Misinformation spread through social media applications has been linked to [minority hate](#), entrenched social polarisation, [vaccine hesitancy](#), and real-life violence.
- **Digital Media Illiteracy among Children:** The [National Education Policy 2020](#) is a missed opportunity to insert [media literacy](#) in the curriculum.
 - Although 'digital literacy' is mentioned once in the document, social media literacy is entirely neglected.
 - This is a serious gap as social media is the primary source of students' literacy.
- **Threats due to Anonymity:** **The most famous reason for anonymity is to be able to speak the truth against vindictive governments** or to not let the views be tagged to the real person being spoken about, in the offline world.
 - While on one hand, this is helpful for someone in sharing their views without any insecurity, it does more harm in the aspect that the user may spread false information up to any extent without being held accountable.

What are the Pros and Cons of Social Media in Elections?

- **Pros:**
 - **Planning Manifestos:**
 - Digital strategies have become increasingly important in the planning of political rallies and party manifestos in recent years.
 - And so far, anyone wanting to read the sentiment of the people, the pre-election survey has been replaced by a tweet survey.
 - **Influence Public Opinion:**
 - Social media helps the political parties in influencing the opinion of undecided voters, in giving the apathetic middle class a reason to go and vote.
 - It also helps in garnering the support base to vote in large numbers and influencing others to vote.
 - **Disseminating Information:**
 - Politicians are **increasingly adopting the new social media for campaigning, disseminating or retrieving information, or contributing** to rational and critical debate.
 - **Addressing People Problems:**
 - Social media makes it easy for people to stay up to date on upcoming events, party schedules, and election agendas.
 - Assign a tech-savvy candidate to manage social media and use it to reach out to people and hear their concerns.

- **Cons:**
 - **Polarisation:**
 - Social media has become an **instrument for politicians that is utilized to create more noise and even is made a way to promote polarization.**
 - **Growing Misrepresentation:**
 - Social media is greatly utilized to **blame and criticize the opposition parties** and the information is misrepresented by misleading and incorrect facts.
 - The number of political minorities is growing, and they are using social media to create a political logjam.
 - **Influence Voters Opinion:**
 - Social media presence and advertising requires a lot of spending. Only affluent parties can spend that much and they can influence the majority of the voter base.
 - During elections, the spread of fake news on Social Media Platforms **influences the people's preferences.**

How is Media regulated during Elections?

- The Election Commission does not regulate media. It has however, the responsibility to enforce the provisions of law or Court directions, which might have linkages with media or certain aspects of media functioning. These laws are mentioned below:
 - **Section 126 of the [Representation of the People Act, 1951](#): It prohibits displaying any election matter by **mean of cinematograph, television or other similar apparatus, during the period of 48** hours ending with the hour fixed for conclusion of poll.**
 - **Section 126A** of the Representation of the People Act, 1951: It prohibits **conduct of exit poll and dissemination of their results** during the period mentioned therein, i.e., the hour fixed for commencement of polls in the first phase and half hour after the time fixed for close of poll for the last phase in all the States and Union Territories.
 - **Section 127A** of the Representation of the People Act, 1951: The **printing and publication of election pamphlets, posters, etc. is governed by its provisions**, which make it mandatory to bear on its face the names and addresses of the printer and the publisher.
- **Section 171H of the [Indian Penal Code](#)**: It prohibits incurring of expenditure on, inter alia, advertisement without the authority of the contesting candidate.

Way Forward

- Social media platforms, political parties, civil society and election authorities **should put more effort into how social media platforms are used by politicians** during elections and frame a comprehensive guideline that benefits the voter.
- Social media, if used properly will certainly add to the vote bank but the other side of the picture will always stay. Hence, **there is a need to take some measures** for the effective use of social media in elections without any violation of individual rights.
- It is high time that to **ensure that the voting is not influenced but is done with People's Own Choices and Preferences** and ensure Free and Fair Election in the country.

UPSC Civil Services Examination Previous Year Question:

Q. What are social networking sites and what security implications do these sites present? **(2013)**

Q. Discuss the role of the Election Commission of India in the light of the evolution of the Model Code of Conduct. **(2022)**

Tackling Malnutrition, Hunger & Food Insecurity

For Prelims: Malnutrition, Hunger, Food Insecurity, Poshan Abhiyaan

For Mains: Tackling Malnutrition, Hunger, Food Insecurity and related Initiatives

Why in News?

India is not on track to achieve the 2030 targets for eradicating hunger, food insecurity and malnutrition.

- According to the [2021 Global Nutrition Report](#), India is not on track on achieving five of the six global maternal, newborn and young child nutrition targets to address — stunting, wasting, anaemia, low birth weight and childhood obesity.
- Six global nutrition targets were set by the World Health Organization in 2012, which are to be achieved by 2025.

What are the Factors Contributing to Food Insecurity and Malnutrition?

- **Current Policies:**
 - The current policies have encouraged modern agri-food systems to price healthy diets many times more than diets that rely on staple cereals.
 - These restrictions have made low-cost foods with a high energy density and little nutritious value more popular.
- **Extinction of Traditional Crops:**
 - Future smart crops — such as amaranthus, buckwheat, minor millet, finger millet, proso millet, foxtail millet and pulses — were traditionally grown in India, making them an important source of food and nutrition security.
 - These traditional crops are gradually becoming extinct for various reasons.
 - A lack of knowledge about their nutritional worth, viable local markets for the output and the rising demand for cash crops are fuelling their extinction.
- **Unbalanced Diet:**
 - In recent years, unanticipated forces in the socio-cultural value system have changed eating habits and diets worldwide.
- **Various Factors:**
 - Such factors include — conflict, climate extremes, economic shocks and growing inequality.
 - These factors frequently occur in combination, complicating fiscal situations and the efforts towards mitigating the same.

What are the Related Initiatives?

- **POSHAN Abhiyaan:** The government of India has launched the National Nutrition Mission (NNM) or POSHAN Abhiyaan to ensure a “Malnutrition Free India” by 2022.
- **Anemia Mukh Bharat Abhiyan:** Launched in 2018, the mission aims at accelerating the annual rate of decline of anaemia from one to three percentage points.
- **Mid-day Meal (MDM) scheme:** It aims to improve nutritional levels among school children which also has a direct and positive impact on enrolment, retention and attendance in schools.
- **The National Food Security Act (NFSA), 2013:** It aims to **ensure food and nutrition security for the most vulnerable** through its associated schemes and programmes, making access to food a legal right.
- **Pradhan Mantri Matru Vandana Yojana (PMMVY):** Rs.6,000 is transferred directly to the bank

accounts of pregnant women for availing better facilities for their delivery.

- **Integrated Child Development Services (ICDS) Scheme:** It was launched in 1975 and the scheme **aims at providing food, preschool education, primary healthcare, immunization, health check-up and referral services** to children under 6 years of age and their mothers.

Way Forward

- **Investment in Agri-Food Systems:**
 - Developing countries like India could invest heavily in agri-food systems to support recovery with enhanced food security and nutrition despite an economic slowdown, decreased household income, irregular tax revenues and inflationary pressures.
- **Reconsider Allocation of Public Funds:**
 - It is also necessary to reconsider how public funds are allocated to repurpose food and agricultural policies — in terms of agricultural productivity, supply chains and consumer behaviour.
- **Bridging Gaps in the Nutritional Composition:**
 - The Indian diet is notably deficient in fruits, legumes, nuts, fish and dairy — all of which are essential for healthy development and the prevention of non-communicable diseases.
 - Thus, bridging the gaps in the nutritional composition of the daily meal is the first step India must take to tackle the triple burden of malnutrition, nutrition disparity and food insecurity.
- **Introducing Future Crops:**
 - Traditional food systems are best positioned to maintain the general public's health and nutritional security as they are aligned with the local, ecological, socio-cultural and economic contexts.
 - The future smart crops are more nutritious compared to staple food crops.
- **Robust Data Management:**
 - India **needs a more robust data management system**, improved responsibility in the food distribution system, effective resource management, enough nutrition education, increased staff and rigorous monitoring to achieve the global nutrition targets by 2030.

UPSC Civil Services Examination Previous Year Question:

Prelims

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)

Q. With reference to the provisions made under the National Food Security Act, 2013, consider the following statements: (2018)

1. The families coming under the category of 'below poverty line (BPL)' only are eligible to receive subsidised food grains.
2. The eldest woman in a household, of age 18 years or above, shall be the head of the household for the purpose of issuance of a ration card.
3. Pregnant women and lactating mothers are entitled to a 'take-home ration' of 1600 calories per day during pregnancy and for six months thereafter.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 only

(c) 1 and 3 only

(d) 3 only

Ans: (b)

Mains

Q. Hunger and Poverty are the biggest challenges for good governance in India still today. Evaluate how far successive governments have progressed in dealing with these humongous problems. Suggest measures for improvement. **(2017)**

Q. What are the salient features of the National Food Security Act, 2013? How has the Food Security Bill helped in eliminating hunger and malnutrition in India? **(2021)**

Q. What are the major challenges of Public Distribution System (PDS) in India? How can it be made effective and transparent? **(2022)**

Source: DTE

Meeting of the SCO Council of Heads

For Prelims: Belt and Road Initiative, International North South Transport Corridor, Climate Change.

For Mains: Shanghai Cooperation Organization.

Why in News?

Recently, China hosted a meeting of the [Shanghai Cooperation Organisation \(SCO\)](#) Heads of Government

- The SCO Heads of Government meet is held annually to focus on the trade and economic agenda of the organisation and approves the SCO's annual budget.
- India has taken over as **Chairperson of the SCO for 2023**, and will host leaders of all SCO countries at a summit in Delhi expected in mid-2023.
- Earlier, the **SCO** summit 2022 was held recently in Samarkand, Uzbekistan.

What are the Highlights of the Meeting?

- The heads of delegations of the SCO member states exchanged views on key issues of **global and regional development**, discussed priority steps to increase trade, economic, cultural, and humanitarian cooperation within the SCO.
- India stated that its total trade with SCO Members is only USD 141 billion, which has potential to **increase manifold**.
 - The bulk of India's trade with **SCO countries is with China, which crossed USD 100 billion** in 2022, while trade with Russia is less than USD 20 billion.
 - Trade with Central Asian countries is less than USD 2 billion, and with Pakistan it is about USD 500 million.

- While taking aim at China's **BRI (Belt and Road Initiative)**, which passes through **parts of Pakistan occupied Kashmir (PoK)**, India said that Connectivity projects **should respect the sovereignty and territorial integrity of Member States** and respect international law.
- India underlined the need for better connectivity in the SCO region built on the centrality of interests of Central Asian states, which will unlock the economic potential of this region in which Chabahar port and the **International North South Transport Corridor (INSTC)** could become enablers.
- India drew attention to its commitment in fighting the challenge of **climate change** and also, its achievements made in this direction.
- India pitched for more trade through Iran's Chabahar port and the **INSTC** that India is a part of, aiming to improve bilateral trade with Central Asian countries.
- A joint communique was issued after the meeting naming all countries except India, which **reaffirmed their support for the BRI**, "including the work to promote the alignment of the 'Belt and Road' construction with the construction of the **Eurasian Economic Union**".

What is the Shanghai Cooperation Organisation?

- **About:**
 - It is a **permanent** intergovernmental international organisation. It was created in 2001.
 - The **SCO Charter was signed in 2002**, and entered into force in 2003.
 - It's a Eurasian political, economic and military organisation aiming to maintain peace, security and stability in the region.
 - It is seen as a counterweight to **North Atlantic Treaty Organization (NATO)**. It is a nine-member economic and security bloc and has emerged as one of the largest transregional international organisations.
- **Official Languages:**
 - Russian and Chinese.
- **Permanent Bodies:**
 - SCO Secretariat in Beijing.
 - Executive Committee of the Regional Anti-Terrorist Structure (RATS) in Tashkent.
- **Chairmanship:**
 - It is by rotation for a year by Member States.
- **Genesis:**
 - Prior to the creation of SCO in 2001, Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan were members of the Shanghai Five.
 - Shanghai Five (1996) emerged from a series of border demarcation and demilitarization talks which the four former Soviet republics held with China to ensure stability along the borders.
 - Following the accession of Uzbekistan to the organisation in 2001, the Shanghai Five was renamed the SCO.
 - **India and Pakistan** became members in 2017.
 - **Current Members:** Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, India and Pakistan.
 - Iran is set to become a permanent member of the SCO in 2023.

What is Belt & Road Initiative (BRI)

- **Belt & Road Initiative (BRI)** is an ambitious project that **focuses on connectivity and cooperation among multiple countries** spread across the continents of Asia, Africa, and Europe. BRI spans about 150 countries (China's Claim).
- Initially announced in the year 2013, the project involves building networks of roadways, railways, maritime ports, power grids, oil and gas pipelines, and associated infrastructure projects.
- **The project covers two parts.**
 - **Silk Road Economic Belt:** It is land-based and is expected to connect China with Central Asia, Eastern Europe, and Western Europe.
 - **21st Century Maritime Silk Road:** It is sea-based and is expected to connect China's southern coast to the Mediterranean, Africa, South-East Asia, and Central Asia.

China's rocky road

Despite objections, Beijing's Belt and Road Initiative – which aims to create a network of ports, bridges and rail lines linking China with Africa and Europe – is chugging along. But some countries have voiced concerns over the project, while cracks have started to appear in the programme in various nations

The Belt and Road Initiative is an umbrella term for mostly China-financed and usually China-built projects in more than 60 countries. Graphic shows maritime and overland trade routes under the project



TEXT SOURCE: AFP, AP; MAP SOURCE: GRAPHIC NEWS

CRACKS IN THE NETWORK

- The initiative has run into some roadblocks in the past year, as the Chinese economy cooled and the U.S. and others accused Beijing of saddling developing countries with too much debt. Some countries, including Thailand, Tanzania, Sri Lanka and Nepal, have scrapped, scaled back or renegotiated projects amid

complaints that they are too costly and give too little work to local contractors

- Last year, Malaysian PM Mohamad cancelled projects, including a \$20 billion railway, he said his country cannot afford. And in 2017, Sri Lanka sold control of its port of Hambantota after falling behind in repaying \$1.5 billion in loans from Beijing

CHINA VS OTHERS

- China says some 150 countries have signed Belt and Road-related agreements since the programme's launch more than five years ago

- China's official position is that it is solely an economic initiative with no political motives. President Xi Jinping said in a speech late last year that China would

never seek hegemony

- Some countries, including the U.S., Japan and India, worry that Beijing is trying to build a China-centered sphere of influence that would undermine their own sway, pulling developing nations into so-called "debt traps" that would give China even-more control over their territories

UPSC Civil Services Examination Previous Year Question:

Prelims

Q. 'Belt and Road Initiative' is sometimes mentioned in the news in the context of the affairs of (2016)

- African Union
- Brazil
- European Union
- China

Ans: (d)

Q. Consider the following: (2022)

- Asian Infrastructure Investment Bank
- Missile Technology Control Regime
- Shanghai Cooperation Organisation

India is a member of which of the above?

- 1 and 2 only
- 3 only
- 2 and 3 only
- 1, 2 and 3

Ans: (d)

Mains

Q. Critically examine the aims and objectives of SCO. What importance does it hold for India? (2021)

World Cities Day

For Prelims: World Cities Day

For Mains: Urbanisation and related issues

Why in News?

World Cities Day is celebrated on 31st October every year to highlight the need for international cooperation to promote global urbanisation and address its challenges.

- According to the United Nations, seven of every 10 people in the world will live in cities by 2050.

What is the History of World Cities Day?

- **Theme for 2022:**
 - Act Local to Go Global.
- **History:**
 - On 27th December 2013, the [United Nations General Assembly \(UNGA\)](#) established World Cities Day through a resolution.
 - The first celebration took place in 2014.
 - The second United Nations Conference on Human Settlements in 1976 influenced the UNGA's decision to establish World Cities Day.
 - The UN-Habitat programme promotes the development of sustainable cities in line with [SDG 11 goals](#).
 - The United Nations Human Settlements Programme (UN-Habitat) is the United Nations agency for human settlements and sustainable urban development.
 - It conducts the annual **Urban October programme** for this purpose which begins on the first Monday of the month and ends on 31st October with World Cities Day.
- **Significance:**
 - World Cities Day helps address the challenges related to urbanisation by bringing together all stakeholders of local and global urban development.
 - Urbanisation is a marker of national economic growth.
 - Such development, however, faces social, economic, demographic and environmental challenges.
 - Some of the most visible challenges to rapid urbanisation are displacement of original inhabitants, felling of trees, animals losing their habitats, issues of healthcare, food supply and pollution.

What are the Related Initiatives?

- **India's Initiatives for Urbanisation:**
 - **Schemes/Programmes Related to Urban Development:**
 - [Smart Cities](#)
 - [AMRUT Mission](#)

- [Swachh Bharat Mission-Urban](#)
- [HRIDAY](#)
- [Pradhan Mantri Awas Yojana-Urban](#)
- **Government Initiatives for Slum Dwellers/Urban Poor:**
 - [Pradhan Mantri Garib Kalyan Yojana](#)
 - [Atmanirbhar Bharat Abhiyan \(self-reliant India\)](#)

Way Forward

- Even though Indian cities are in the grip of explosive motorisation due to car-centric growth, there are opportunities in its fundamental strength in high usage of public transport, walking and cycling in most cities of India.
- The time had come for **active policies to make sustainable modes** work for all income levels and the rich.
- Transport sector policies have become more progressive and inclusive in India. But implementation and investments are slow in the sector.
- India also **needs active policies to retain its compact urban forms to reduce travel** distances and promote transit-oriented development along with mixed use and mixed income development to make cities more accessible and liveable for all.

UPSC Civil Services Examination Previous Year Question:

Q. With reference to the role of UN-Habitat in the United Nations programme working towards a better urban future, which of the statements is/are correct? (2017)

1. UN-Habitat has been mandated by the United Nations General Assembly to promote socially and environmentally sustainable towns and cities to provide adequate shelter for all.
2. Its partners are either governments or local urban authorities only.
3. UN-Habitat contributes to the overall objective of the United Nations system to reduce poverty and to promote access to safe drinking water and basic sanitation.

Select the correct answer using the code given below:

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

Ans: (b)

Source: DTE

Decentralising MGNREGS

For Prelims: MGNREGA, Issues, Minimum Wages Act, 1948.

For Mains: Government Policies & Interventions

Why in News?

An internal study by the Ministry of Rural Development has suggested decentralisation of the [Mahatma Gandhi National Rural Employment Guarantee Scheme \(MGNREGS\)](#), allowing for more “flexibility” at the ground level.

What are the Findings of the Study?

▪ Issues:

- In the past few years, the fund management has been centralized instead of paying the [Gram Sabhas](#) an advance enabling them to decide the work they want to undertake.
- There is a chronic problem of delay in fund disbursement, where beneficiaries end up buying the construction **material themselves to complete the projects.**
 - In Himachal Pradesh and Gujarat, the delay in wages was by three or four months and the **material component was delayed by six months.**
- MGNREGS wages were **far below the market rate in many States**, defeating the purpose of acting as a safety net.
 - At present, the minimum wage of a farm labourer in Gujarat is RS 324.20, but the MGNREGS wage is Rs 229.
 - The private contractors pay far more.

▪ Suggestions:

- There should be **a greater diversification of permissible works** instead of listing the types of permissible works, broad categories of works may be listed out and flexibility should be given at ground level to select the type of works as per broad categories.
- The gram sabhas can take into account the **local conditions and the community's requirements** instead of chasing a target set for them.
- For making disbursement on time there should be **revolving funds (an extra internal monetary pool) that can be utilised** whenever there is a delay in the Central funds.

What is MGNREGA?

▪ About:

- MGNREGA, which was launched in 2005, is one of the **largest work guarantee programmes** in the world.
- The primary objective of the scheme is to guarantee 100 days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work.

▪ Legal Right to Work:

- Unlike earlier employment guarantee schemes, the act aims **at addressing the causes of chronic poverty** through a rights-based framework.
- At least one-third of beneficiaries have to be women.
- Wages must be paid according to the statutory minimum wages specified for agricultural labourers in the state under the [Minimum Wages Act, 1948](#).

▪ Demand-Driven Scheme:

- The most important part of MGNREGA's design is its legally-backed guarantee for any rural adult to get work within **15 days of demanding it, failing which an 'unemployment allowance' must be given.**
- This demand-driven scheme enables the self-selection of workers.

▪ Decentralised Planning:

- There is an emphasis on strengthening the process of decentralisation by giving a significant role in [Panchayati Raj Institutions \(PRIs\)](#) in planning and implementing these works.
- The act mandates [Gram sabhas](#) to recommend the works that are to be undertaken and at least 50% of the works must be executed by them.



UPSC Civil Services Examination Previous Year Question:

Q. Among the following who are eligible to benefit from the “Mahatma Gandhi National Rural Employment Guarantee Act”? (2011)

- (a) Adult members of only the scheduled caste and scheduled tribe households
- (b) Adult members of below poverty line (BPL) households
- (c) Adult members of households of all backward communities
- (d) Adult members of any household

Ans: (d)

[Source: TH](#)

Chhattisgarh Foundation Day

Why in News?

Recently, the third edition of the National Tribal Dance Festival to be held from 1st November to 3rd November, 2022 was inaugurated at Raipur, Chhattisgarh on the event of state foundation day.

- Over **1,500 tribal artistes from around India and 10 countries**, including Mozambique, Mongolia, Tongo, Russia, Indonesia, Maldives, Serbia, New Zealand and Egypt will be hosted at the event.

What are the Key Facts about Chhattisgarh?

▪ About:

- **Chhattisgarh** was carved out of **Madhya Pradesh** on **1st November, 2000** with its **16 Chhattisgarhi speaking districts**.
- It is the **10th largest state in India** with an area of 135,190 sq-km.
- It is an **important hub for the [production of steel](#) and electrical power in India**, producing about **15% of the total steel produced in India**.
- Chhattisgarh is **mainly famous for its agriculture** accounting for about **80% of the work force**. It is also known as '**Dhan Ka Katora**' meaning 'Bowl of Rice' for the production of rice.

▪ Borders:

- It is surrounded by **seven states: Madhya Pradesh, Maharashtra, Andhra Pradesh, Telangana, Orissa, Jharkhand and Uttar Pradesh**.

▪ Capital:

- **Raipur**.

▪ Language:

- The native language of people of Chhattisgarh is **Chhattisgarhi**.
 - However, **Hindi is more prominent here**.

▪ Tribes:

- The most familiar tribes found in the state are **Miriam, Baiga, Kamars, Halbas, [Gonds](#), Bhumja, Kawars, etc.**

▪ Important Festivals:

- Few of the remarkable festivals celebrated by the tribal societies comprises Bastar Dussehra, **Bastar Lokotsav, Koriya Mela, Fagun Wadaï, Madai Festival, Goncha Festival**, Pola Festival, and others.

▪ Mineral Resources:

- It is a leading producer of minerals such as coal, iron ore and dolomite.
 - Moreover, considerable reserves of bauxite, limestone and quartzite are available in the state.
 - The state accounts for **35.4% of tin ore reserves of India**. Chhattisgarh is the **only state in India that produced tin concentrates**.

▪ Important Rivers:

- There are four main catchment areas in the state, mainly **[Mahanadi](#), [Ganga](#), [Godavari](#)**, and **[Narmada](#)**.
 - Under this, the Mahanadi, Shivnath, Arpa, Indravati, Sabari, Leelagar, Hasdo, Pairi, and Sondur are main rivers.

▪ National Parks:

- Indravati National Park
- **[Guru Ghasidas National Park](#)**
- Kanger Valley National Park

▪ Wildlife Sanctuaries:

- Tamor Pingla Wildlife Sanctuary
- Pamed Wildlife Sanctuary
- Gormada Wildlife Sanctuary
- Badalkhol Wildlife Sanctuary
- Bhoramdeo Wildlife Sanctuary

- Bhairamgarh Wildlife Sanctuary
- Seramsot Wildlife Sanctuary
- Barnawapara Wildlife Sanctuary
- Sitanadi Wildlife Sanctuary
- Nandan Van Wildlife Sanctuary
- Python Forest Wildlife Sanctuary
- Narsinghgarh Wildlife Sanctuary
- Udanti Wild Buffalo Wildlife Sanctuary

▪ **Tiger Reserve:**

- National Tiger Conservation Authority (NTCA) has designated the **combined areas of the Guru Ghasidas National Park and Tamor Pingla Wildlife Sanctuary as a Tiger Reserve.**



CHHATTISGARH DISTRICT MAP



Map is not to scale
infoandopinion.com

UPSC Civil Services Examination Previous Year Question:

Q. Which of the following minerals are found in a natural way in the State of Chhattisgarh? (2008)

1. Bauxite
2. Dolomite
3. Iron ore
4. Tin

Select the correct answer using the code given below:

Code:

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

Ans: (d)

[Source: IE](#)

Mudumalai Tiger Reserve

Why in News?

The Forest Department is coming up with a **comprehensive strategy to deal with the spread of the invasive species like *Senna spectabilis*** which continues to spread rapidly in the buffer zone of the **Mudumalai Tiger Reserve (MTR)** in Nilgiris hill district.

- Invasive weeds such as [Senna spectabilis](#) and [Lantana camara](#), as well as wattle, had taken over vast swathes of the Nilgiris.
- The invasive weed has a **negative effect on local biodiversity**, crowding out native species and limiting food availability for wildlife.

What are the Key Facts about Mudumalai Tiger Reserve?

- **About:**
 - At the tri-junction of three states, namely **Karnataka, Kerala, and Tamil Nadu**, it is located in the Nilgiris District of Tamil Nadu.
 - It has a common boundary with [Wayanad Wildlife Sanctuary](#) (Kerala) on the West, [Bandipur Tiger Reserve](#) (Karnataka) on the North, together forming a large conservation landscape for flagship species such as Tiger and [Asian Elephant](#).
 - Mudumalai tiger reserve is among the 14 Indian tiger reserves that were awarded the [Conservation Assured | Tiger Standards \(CA|TS\) status](#) for effective management of target species.
 - The climate of Mudumalai is moderate. It experiences cold weather during the month of December or the beginning of January and hot weather is experienced during the months of March and April.
- **Important Flora and Fauna:**
 - It has tall grasses, commonly referred to as "Elephant Grass", Bamboo of the giant variety,

- valuable timber species like Teak, Rosewood, etc.
- There are **several species of endemic flora**. Such a varied habitat is inhabited by a variety of animals which include tigers, elephants, Indian Gaur, Panther, Sambar, Spotted Deer, Barking Deer, Mouse Deer, Common Langur, Malabar Giant Squirrel, Wild Dog, Mongoose, Jungle Cat, Hyena, among others.
- This reserve has a wide variety of more than 260 species of birds.
 - **8% of bird species found in India** are recorded in Mudumalai.

What are the Other Tiger Reserves of Tamil Nadu?

▪ Anamalai:

◦ About:

- Carved out of the Anamalai hills, the tiger reserve falls within the [Western Ghats](#), which in itself is one of the 25 Global Biodiversity Hotspots.
- The reserve consists of diverse habitats, including tropical forests, shola jungles, bamboo grove and vast grasslands.

◦ Flora and Fauna:

- Some of the key animals found here apart from the tiger are the Gaur, sloth bear, elephants, pangolin, deer, and over 350 species of birds. Crocodiles can be spotted in the Amaravathy dam reservoir.

▪ Kalakkad - Mundanthurai:

◦ About:

- Popularly known as KMTR, this reserve **was created in 1988 by combining the existing** and contiguous Kalakkad and Mundanthurai wildlife sanctuaries.
- Kalakkad - Mundanthurai was declared as the first Tiger reserve in Tamil Nadu. It occupies the southern part of the Western Ghats and consists of wet evergreen forests; it is the catchment area of 14 rivers.
- It is also part of the Agasthyamala Biosphere Reserve.

- **Agasthyamala Biosphere Reserve** is considered one of the five centres of plant diversity and endemism in India by the [International Union for Conservation of Nature \(IUCN\)](#).

▪ Flora and Fauna:

- Apart from tigers, the forest is home to Sambar, spotted deer, elephants, leopards, wild dogs, etc., and a large number of bird species, reptiles, etc.

▪ Sathyamangalam:

◦ About:

- A tiger reserve since 2013, it forms an important corridor between the Eastern and Western Ghats through the Nilgiris.
- According to the 2019 census, it has an 83-individual tiger population and a 111-individual leopard population.

▪ Srivilliputtur Megamalai:

▪ About:

- The latest tiger reserve in the state, the Srivilliputhur-Megamalai Tiger Reserve (SMTR), was formed in February 2021 by combining the Megamalai and Srivilliputhur wildlife sanctuaries. It lies in the Western Ghats region.
- SMTR is also adjacent to the Kalakkad Mundanthurai reserve.

▪ Flora and Fauna:

- It's a blend of tropical evergreen and semi-evergreen forests, dry deciduous and moist mixed deciduous woods, and grassland in this area.



UPSC Civil Services Examination Previous Year Question:

Q. Which of the following are in Agasthyamala Biosphere Reserve? (2019)

- (a) Neyyar, Peppara and Shendurney Wildlife Sanctuaries; and Kalakad Mundanthurai Tiger Reserve
- (b) Mudumalai, Sathyamangalam and Wayanad Wildlife Sanctuaries; and Silent Valley National Park
- (c) Kaundinya, Gundla Brahmeswaram and Papikonda Wildlife Sanctuaries; and Mukurthi National Park
- (d) Kawal and Sri Venkateswara Wildlife Sanctuaries; and Nagarjunasagar-Srisailem Tiger Reserve

Ans: (a)

[Source:TH](#)

Machchhu River

Why in News?

Recently, a suspension bridge collapsed **over the river Machchu, in Gujarat's Morbi district**, which killed almost 135 people.

- The suspension bridge, or **Jhulta Pul**, was built by the ruler of the princely state of Morbi, Sir Waghji Thakor, in 1877.
- It was made to reflect the '**progressive and scientific nature of the rulers of Morbi**'. It was inaugurated by the then-Bombay governor, Richard Temple, in 1879.

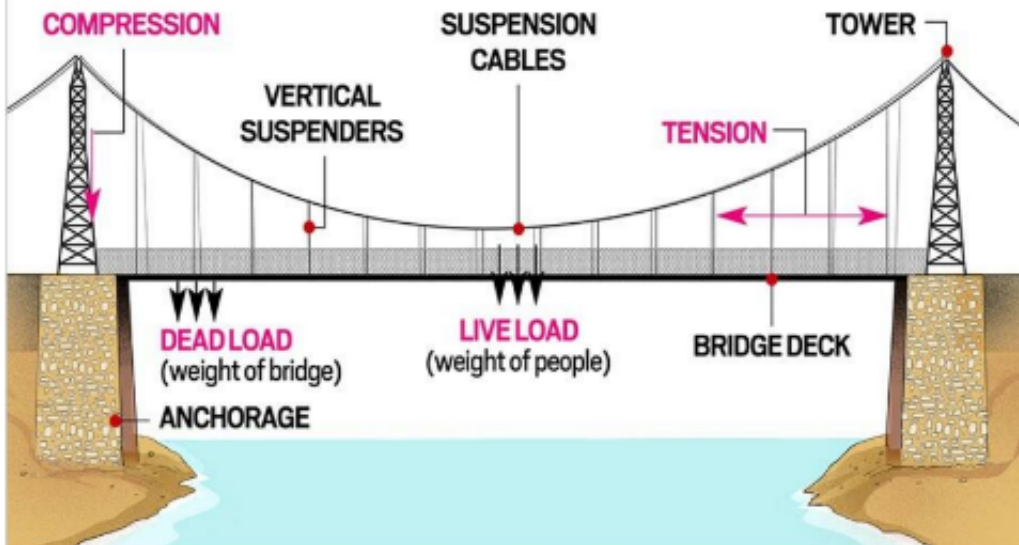
What is Suspension Bridge?

- A suspension bridge is a type of bridge in which **the deck is hung below suspension cables** on vertical suspenders.
- The basic structural components include stiffening girders, two or more main suspension cables, and towers and anchorages for cables at either end of the bridge.
- The main cables are suspended between the towers and are connected to the anchorage or the bridge itself. The vertical suspenders carry the weight of the deck and the commuter load on it.
- The design ensures that **the load on the suspension cables is transferred to the towers at the two ends**, which transfer them further by **vertical compression** to the ground by way of the anchorage cables.



FORCES AT PLAY

Suspension bridges depend on the balance of the forces of compression and tension



What is Machchhu River?



- **About:** The Machchhu river **originates from Madla hills in the Surendranagar district of Gujarat and ends 141.75 km downstream in the Rann of Kutch.**
- **Tributaries:** Beti, Asoi, Jamburi, Benia, Machchhori, Maha are the tributaries of Machchhu river.
- **Dams:** It has two dams to augment irrigation to alleviate droughts in Saurashtra.

What is the Significance of Morbi District?

- It is famous for its **ceramic industry**. Around 70% of India's ceramics are produced in Morbi, and ceramic tiles manufactured here are exported to countries in the **Middle East, East Asia, and Africa**.

UPSC Civil Services Examination Previous Year Question:

Q. Consider the following rivers: (2021)

1. Brahmani
2. Nagavali
3. Subarnarekha
4. Vamsadhara

Which of the above rise from the Eastern Ghats?

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

Ans: B

- The Brahmani river, also known as South Koel, rises near Nagri village in Ranchi district of Jharkhand. **Hence, 1 is not correct.**
- The Nagavali river originates in the Eastern Ghats near Lakhbahal, located in the Kalahandi district of Odisha. Langulya is another name for Nagavali River. **Hence, 2 is correct.**
- Subarnarekha river originates in the Chota Nagpur Plateau near Nagri village in Ranchi district of Jharkhand. **Hence, 3 is not correct.**
- Vamsadhara river rises in the Eastern Ghats of Orissa and enters Srikakulam district in Bhamini Mandal and finally falls into the Bay of Bengal near Kalingapatnam. **Hence, 4 is correct. Therefore, option (b) is the correct answer.**

Source: IE

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