



West Seti Power Project: Nepal

For Prelims: India-Nepal Relations, India-Nepal Treaty of Peace and Friendship of 1950, West Seti Hydropower Project

For Mains: India-Nepal Relations and Significance

Why in News?

India will be taking over **West Seti Hydropower Project** nearly four years after China withdrew from it, ending a six-year engagement between 2012 and 2018.

- Earlier, the Indian [Prime Minister visited Lumbini](#), where he celebrated [2566th Buddha Jayanti](#) celebrations, also Nepal invited India to invest in West Seti Hydropower Project.

What is the West Seti Power Project?

- It is a proposed **750-megawatt Hydropower Project**, which is to be built on the **Seti river in far-western Nepal**, which has remained on the drawing board for the last six decades.
- Lately, the government has **remodeled the project as West Seti and Seti River (SR-6)**, a joint storage project, with the capacity to generate 1,200 megawatts of electricity.
- This storage or reservoir will **fill up during the monsoon season and the water will be drawn to generate power during peak hours** each day in the dry season.
- Its success is expected to **restore India's image in Nepal and give it weightage in future** considerations for hydropower projects, when competition is bound to be tough. West Seti, therefore, **has the potential to be a defining model for Nepal India's power relations in future.**

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How have been India-Nepal Power relations?

- Nepal is **rich in power sources** with around **6,000 rivers** and an **estimated potential for 83,000 MW**.
- **Mahakali treaty was signed back in 1996**, to produce 6,480 MW, but India has still not been able to come out with the Detailed project Report.
- The Upper Karnali project, for which the multinational GMR signed the contract, has not made any headway for years.
- **India's success in executing the 900-MW Arun Three project in eastern Nepal's Sankhuwa Sabha**, and whose foundation was laid in 2018 and which is set for completion by 2023 has helped build faith in India recently.
- During the Indian PM's visit to Nepal in 2014, he had said **India must start executing its projects timely**.
- Nepal's Constitution has a provision under which **any treaty or agreement with another country on natural resources will require Parliament's ratification by at least a two-thirds majority**. That will also mean homework will be required before any hydro project is signed and given for execution.
- Nepal has a massive power shortfall as it generates only around 900 MW against an installed capacity of nearly 2,000 MW. Although it is currently selling 364 MW power to India, it has over the years importing from India.

How have been India-Nepal Diplomatic Ties?

- After a standoff between Nepal and India led to the economic blockade of 2015, **equations changed after the new PM Deuba took over Oli**, who visited India recently where he decided to establish Fraternal Ties with India.
- Nepal is an **important neighbour of India and occupies special significance** in its foreign policy because of the geographic, historical, cultural and economic linkages/ties that span

centuries.

- India and Nepal share similar ties in terms of [Hinduism](#) and [Buddhism](#) with Buddha's birthplace Lumbini located in present day Nepal.
- The two countries not only share an open border and unhindered movement of people, but they also have close bonds through marriages and familial ties, popularly known as Roti-Beti ka Rishta.
- The India-Nepal [Treaty of Peace and Friendship of 1950](#) forms the bedrock of the special relations that exist between India and Nepal.
- Rivers originating in Nepal feed the [perennial river systems](#) of India in terms of ecology and hydropower potential.
- However, the [border issue](#) erupted in November 2019 when Nepal had released a new political map that claims Kalapani, Limpiyadhura and Lipulekh of Uttarakhand as part of Nepal's territory. The area of Susta (West Champaran district, Bihar) can also be noted in the new map.

Way Forward

- Until India agrees to value Nepal's water and the existing focus on power is not reviewed, **mutual distrust will continue to eclipse the potential for progress of both sides in the long term.**
- Once the projects are made multi-purpose — with flood control, navigation, fisheries, irrigation contributing to agricultural growth etc, giving due value to water — the **cost of power will be much lower compared to existing rates**, and people on both sides will have multiple benefits.
- The power trade agreement needs to be such that India can build trust in Nepal. Despite more renewable energy projects (solar) coming up in India, hydropower is the only source that can manage peak demand in India.

[Source: IE](#)

Surety Bonds

For Prelims: Surety Bonds, Performance Bond, Advance Payment Bond, Bid Bonds

For Mains: Surety bonds and its role in boosting infrastructure development

Why in News?

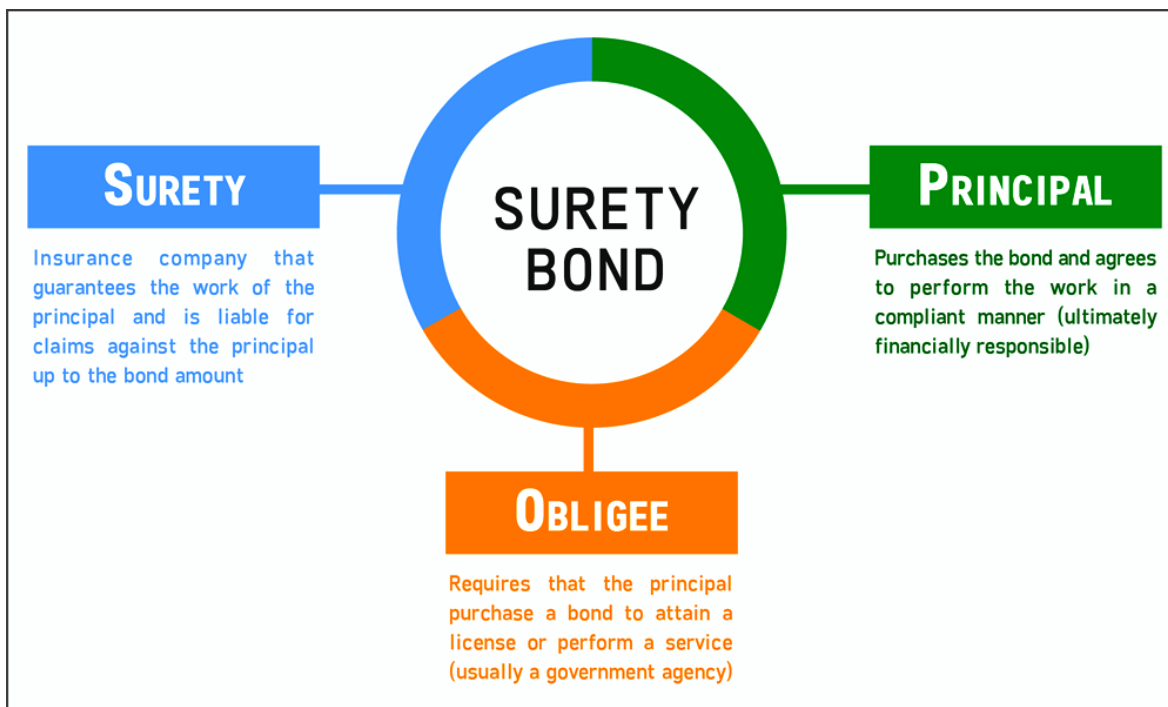
Recently the Ministry for Road Transport & Highways (MORTH) has asked insurance regulator [Insurance Regulatory and Development authority \(IRDAI\)](#) to develop a model product on Surety Bonds in consultation with general insurers.

- **Several challenging issues which made Surety Bond a complete non-starter** with the insurers have also been discussed and it was proposed to IRDAI that it should design a model product.
- The issue of Changes to the Indian Contract Act as well as the [Insolvency and Bankruptcy Code \(IBC\)](#) was also highlighted so that Surety Bonds are on the same footing as bank guarantees when it comes to recourse available to them in the case of default - are also being considered.

What is Surety Bond?

- **About:**

- A surety bond can be defined in its simplest form as a **written agreement to guarantee compliance, payment, or performance of an act.**
 - Surety is a unique type of insurance because it involves a **three-party agreement.** The three parties in a surety agreement are:
 - **Principal** - the party that purchases the bond and undertakes an obligation to perform an act as promised.
 - **Surety** - the insurance company or surety company that guarantees the obligation will be performed. If the principal fails to perform the act as promised, the surety is contractually liable for losses sustained.
 - **Obligee** - the party who requires, and often receives the benefit of— the surety bond. For most surety bonds, the obligee is a local, state or federal government organization.
 - Surety bond is **provided by the insurance company** on behalf of the contractor to the entity which is awarding the project.
- **Aim:**
- Surety bonds are mainly aimed at infrastructure development, mainly to reduce indirect cost for suppliers and work-contractors thereby diversifying their options and acting as a substitute for bank guarantee.
- **Benefits:**
- Surety bonds **protect the beneficiary** against acts or events that impair the underlying obligations of the principal.
 - They **guarantee the performance** of a variety of obligations, from construction or service contracts to licensing and commercial undertakings.



What are the issues with the Surety Bonds?

- Surety bonds, a new concept, are **risky and insurance companies in India are yet to achieve expertise** in risk assessment in such business.
- Also, there's no clarity **on pricing, the recourse available against defaulting contractors and reinsurance options.**
 - These are critical and may impede the creation of surety-related expertise and capacities and eventually deter insurers from writing this class of businesses.

How can it boost the Infra Project?

- The move to frame rules for surety contracts will **help address the large liquidity and funding**

requirements of the infrastructure sector.

- It will **create a level-playing field for large, mid and small contractors**.
- The Surety insurance business will assist in developing an alternative to bank guarantees for construction projects.
 - This shall **enable the efficient use of working capital and reduce the requirement of collateral** to be provided by construction companies.
- Insurers shall work together with financial institutions to share risk information.
 - Hence, this shall assist in releasing liquidity in infrastructure space without compromising on risk aspects.

What are the IRDAI Guidelines on Surety Bonds?

- IRDAI (Surety Insurance Contracts) Guidelines, 2022 came into force in April 2022.
- The regulator has said the premium charged for all surety insurance policies underwritten in a financial year, including all installments due in subsequent years for those policies, **should not exceed 10% of the total gross written premium** of that year, subject to a maximum of Rs 500 crore.
- As per [Insurance Regulatory and Development Authority of India \(IRDAI\)](#), **Insurers can issue contract bonds**, which provide assurance to the public entity, developers, subcontractors and suppliers that the contractor will fulfil its contractual obligation when undertaking the project.
 - **Contract bonds may include:** Bid Bonds, Performance Bonds, Advance Payment Bonds and Retention Money.
 - **Bid Bonds:** It provides **financial protection to an obligee** if a bidder is awarded a contract pursuant to the bid documents, but fails to sign the contract and provide any required performance and payment bonds.
 - **Performance Bond:** It provides **assurance that the obligee will be protected if the principal or contractor fails** to perform the bonded contract. If the obligee declares the principal or contractor as being in default and terminates the contract, it can call on the Surety to meet the Surety's obligations under the bond.
 - **Advance Payment Bond:** It is a promise by the Surety provider to pay the outstanding balance of the advance payment in case the contractor fails to complete the contract as per specifications or fails to adhere to the scope of the contract.
 - **Retention Money:** It is a **part of the amount payable** to the contractor, which is retained and payable at the end after successful completion of the contract.
- The limit of guarantee **should not exceed 30%** of the contract value.
- Surety Insurance contracts **should be issued only to specific projects and not clubbed for multiple projects**.

UPSC Civil Services, Previous Year Questions (PYQ)

Q. With reference to 'IFC Masala Bonds', sometimes seen in the news, which of the statements given below is/ are correct? (2016)

1. The International Finance Corporation, which offers these bonds, is an arm of the World Bank.
2. They are the rupee-denominated bonds and are a source of debt financing for the public and private sector.

Select the correct answer using the code given below:

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

Ans:(c)

Exp:

- The **World Bank Group**, which is a vital source of financial and technical assistance to developing countries, consists of five distinct yet complementary organizations, viz.,
 - International Bank for Reconstruction and Development (IBRD),
 - International Development Association (IDA),
 - **International Finance Corporation (IFC), Hence, statement 1 is correct.**
 - Multilateral Investment Guarantee Agency (MIGA),
- International Centre for Settlement of Investment Disputes (ICSID).
- Membership in IFC is open only to member countries of the World Bank. Its board was established in 1956.
- IFC is owned by 184 member countries, a group that collectively determines the policies. Through a Board of Governors and a Board of Directors, the member countries guide IFC's programs and activities.
- **Masala Bonds are rupee-denominated borrowings issued by Indian entities in overseas markets.** Masala means 'spices' and the term was used by International Finance Corporation (IFC) to popularise the culture and cuisine of India on foreign platforms.
- The objective of Masala Bonds is to **fund infrastructure projects in India**, fuel internal growth via borrowings and internationalize the Indian currency. **Hence, statement 2 is correct.**
- **Therefore, option (c) is the correct answer.**

[Source: IE](#)

Sovereign Gold Bond Scheme

For Prelims: Government Securities (GS) Act, 2006, RBI, Income Tax Act, 1961

For Mains: Sovereign Gold Bond Scheme, its advantages and disadvantages

Why in News?

The Government of India, in consultation with the [Reserve Bank of India](#), will issue **Sovereign Gold Bonds in tranches for 2022-23**.

- Investment in SGBs went up sharply during [Covid-impacted years](#) as **investors looked for safer options amid volatility in equity markets with 2020-21 and 2021-22 accounting for nearly 75% of total sales** of the bonds since the inception of the scheme in November 2015.

What is the Sovereign Gold Bond Scheme?

- **Launch:**
 - The SGB scheme was **launched in November 2015** with an **objective to reduce the demand for physical gold** and shift a part of the domestic savings - used for the purchase of gold - into financial savings.
- **Issuance:**
 - The Gold Bonds are issued as **Government of India Stock under the Government Securities (GS) Act, 2006**.
 - These are issued by the [Reserve Bank of India \(RBI\)](#) on behalf of the Government of India.
 - Bonds are sold through Commercial banks, Stock Holding Corporation of India Limited

(SHCIL), designated post offices and recognised stock exchanges viz., [National Stock Exchange of India Limited](#) and Bombay Stock Exchange, either directly or through agents.

▪ **Eligibility:**

- The bonds are **restricted for sale to resident individuals, Hindu Undivided Families (HUFs), trusts**, universities and charitable institutions.

▪ **Features:**

- **Issue Price:** Gold bond prices are linked to the price of gold of 999 purity (24 carats) published by **India Bullion and Jewellers Association (IBJA)**, Mumbai.
- **Investment Limit:** Gold bonds can be purchased **in the multiples of one unit, up to certain thresholds** for different investors.
 - The upper limit for retail (individual) investors and HUFs is **4 kilograms (4,000 units) each per financial year**. For trusts and similar entities, an upper limit of 20 kilograms per financial year is applicable.
 - Minimum permissible investment is 1 gram of gold.
- **Term:** The gold bonds come with a **maturity period of eight years**, with an option to exit the investment after the first five years.
- **Interest Rate:** A fixed rate of 2.5% per annum is applicable on the scheme, payable semi-annually.
 - The interest on Gold Bonds shall be taxable as per the provision of Income Tax Act, 1961.

▪ **Benefit:**

- Bonds can be used as **collateral for loans**.
- The capital gains tax arising on **redemption of SGB to an individual has been exempted**.
 - Redemption is the **act of an issuer repurchasing a bond** at or before maturity.
 - **Capital gain is the profit earned on the sale of an asset** like stocks, bonds or real estate. It results in when the selling price of an asset exceeds its purchase price.

▪ **Disadvantages of Investing in SGB:**

- This is a **long term investment** unlike physical gold which can be sold immediately.
- Sovereign gold bonds are **listed on exchange but the trading volumes are not high**, therefore it will be difficult to exit before maturity.

UPSC Civil Services Examination, Previous year Question (PYQ)

Q. What is/are the purpose/purposes of Government's 'Sovereign Gold Bond Scheme' and 'Gold Monetization Scheme'? (2016)

1. To bring the idle gold lying with Indian households into the economy.
2. To promote FDI in the gold and jewellery sector.
3. To reduce India's dependence on gold imports.

Select the correct answer using the code given below:

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

Ans: (c)

Exp:

- Sovereign Gold Bond Scheme and Gold Monetization Scheme were launched by the Government in 2015.
- The main objectives of these schemes are:
 - To mobilize the gold held by households and institutions in the country. **Hence, 1 is**

correct. To provide a fillip to the gems and jewellery sector in the country by making gold available as raw material on loan from the banks

- To be able to reduce reliance on import of gold over time to meet the domestic demand. **Hence, 3 is correct.**
- To promote FDI in gold and jewellery sector is not the objective of these schemes. **Hence, 2 is not correct.** Therefore, option (c) is the correct answer.

[Source: TOI](#)

Amrit Sarovar Mission

For Prelims: Amrit Sarovar Mission, Azadi ka Amrit Mahotsav, Mahatma Gandhi NREGS, XV Finance Commission Grants, PMKSY

For Mains: Government Interventions and Policies, XV Finance Commission Grants, Amrit Sarovar Mission

Why in News?

The Union government has asked the Ministry of Railways and the National Highways Authority of India (NHAI) to use the soil/silt excavated from ponds/tanks in all districts across the country under the Amrit Sarovar Mission for their infrastructure projects.

What is Amrit Sarovar Mission?

▪ About:

- Amrit Sarovar Mission was launched on 24th April 2022 with a view to conserve water for the future.

▪ Aim:

- The Mission is aimed at developing and rejuvenating 75 water bodies in each district of the country as a part of celebration of **Azadi ka Amrit Mahotsav**.
- In total, it would lead to the creation of **50,000 water bodies** of a size of about an Acre or more.
- The Mission encourages **mobilisation of citizen and non-govt resources** for supplementing these efforts.

▪ Ministries Involved:

- This Mission has been launched with a whole Government Approach with 6 Ministries/Department namely:
 - Department of Rural Development
 - Department of land resources
 - Department of Drinking Water and Sanitation
 - Department of Water resources
 - Ministry of Panchayati Raj
 - Ministry of Forest, Environment and Climate Changes.

▪ Technical Partner:

- **Bhaskaracharya National Institute for Space Application and Geo-informatics (BISAG-N)** has been engaged as technical partner for the Mission.

▪ Refocusing with Various Schemes:

- The Mission works through the States and Districts, through refocusing of various schemes

such as **Mahatma Gandhi NREGS, XV Finance Commission Grants, PMKSY** sub schemes such as **Watershed Development Component, Har Khet Ko Pani** besides States' own schemes.

▪ **Target:**

- Mission Amrit Sarovar is to be completed by 15th August 2023.
- Around **50,000 Amrit Sarovar** may be constructed in the country.
 - Each of these Amrit Sarovar will have **approx. area of 1 acre** with a water holding capacity of **10,000 cubic meters**.
- People's participation in the Mission is the focal point.
 - **Local freedom fighter, their family members, Martyr's family members, Padma Awardee and citizens of the local area** wherein an Amrit Sarovar is to be constructed, will be engaged at all stages.
- On every **15th August, National Flag hoisting will be organized on every Amrit Sarovar site**.

▪ **Achievements:**

- So far, 12,241 sites have been finalized for construction of Amrit Sarovars by States/Districts, out of which works has started on 4,856 Amrit Sarovars.

What is Azadi Ka Amrit Mahotsav?

- Azadi Ka Amrit Mahotsav is an **initiative of the Government of India** to celebrate and commemorate **75 years of independence** and **the glorious history of its people, culture and achievements**.
- This Mahotsav is dedicated to the people of India who have not only been instrumental in bringing India thus far in its evolutionary journey but also hold within them the power and potential to enable Prime Minister Narendra Modi's vision of activating **India 2.0**, fuelled by the spirit of **Aatmanirbhar Bharat**.
- The official journey of Azadi ka Amrit Mahotsav commenced on **12th March 2021** which started a **75-week countdown to our 75th anniversary of independence** and **will end** post a year on **15th August 2023**.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. Which of the following best describes/describe the aim of 'Green India Mission' of the Government of India? (2016)

1. Incorporating environmental benefits and costs into the Union and State Budgets thereby implementing the 'green accounting'.
2. Launching the second green revolution to enhance agricultural output so as to ensure food security to one and all in the future.
3. Restoring and enhancing forest cover and responding to climate change by a combination of adaptation and mitigation measures.

Select the correct answer using the code given below.

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

Ans: (c)

Exp:

- National Mission for a Green India, also known as Green India Mission (GIM), is one of the eight

missions outlined under India's National Action Plan on Climate Change. It was launched in February 2014.

▪ **Goals of Mission**

- To increase forest/tree cover to the extent of 5 million hectares (mha) and improve quality of forest/tree cover on another 5 mha of forest/non forest lands. Separate sub-targets existing for different forest types and ecosystems (eg., wetland, grassland, dense forest, etc.). Hence, 3 is correct.
- Improvement in quality of forest cover and ecosystem services of forests/non-forests, including moderately dense, open forests, degraded grassland and wetlands (5 mha).
- Eco-restoration/afforestation of scrub, shifting cultivation areas, cold deserts, mangroves, ravines and abandoned mining areas (1.8 mha) with separate sub-targets for each one of those.
- Improvement in forest and tree cover in urban/ peri-urban lands (0.20 mha).
- Improvement in forest and tree cover on marginal agricultural lands/fallows and other non-forest lands under agro-forestry/social forestry (3 mha).
- To improve/enhance eco-system services like carbon sequestration and storage (in forests and other ecosystems), hydrological services and biodiversity, along with provisioning services like fuel, fodder, and timber and non-timber forest produces (minor forest produces or MFPs) etc., which are expected to result from the treatment of 10 mha.
- To increase forest based livelihood income for about 3 million households in and around these forest areas, and enhanced annual CO₂ sequestration by 50 to 60 million tonnes by the year 2020. Launching 2nd Green Revolution and incorporating green accounting in the Union and State budget are not the objectives of Green India Mission. Hence, 1 and 2 are not correct. **Therefore, option (c) is the correct answer.**

[Source: TH](#)

Aspirational District Programme

For Prelims: Aspirational District programme, SDG, NITI Aagad

For Mains: Government Policies and Interventions

Why in News?

Recently, the Prime Minister has expressed his desire to extend the **Aspirational District Programme to block and city levels.**

What is Aspirational Districts Programme?

▪ **About:**

- It was launched in 2018 which aims to **transform districts** that have shown relatively **lesser progress in key social areas.**
- Aspirational Districts are those districts in India, that **are affected by poor socio-economic indicators.**

▪ **Broad Contours of the Programme:**

- **Convergence** (of Central & State Schemes)
- **Collaboration** (of Central, State level 'Prabhari' Officers & District Collectors),

- **Competition** among districts through monthly [delta ranking](#).
 - The delta ranking of the Aspirational Districts combines the innovative use of data with pragmatic administration, keeping the district at the locus of inclusive development.
- **Objectives:**
 - It focuses **on the strength of each district, identifying low-hanging fruits for immediate improvement and measuring progress** by ranking districts on a monthly basis.
 - Districts are prodded and encouraged to first catch up with the best district within their state, and subsequently aspire to become one of the best in the country, by **competing with, and learning from others** in the **spirit of competitive & cooperative federalism**.
 - The Government is committed to raising the living standards of its citizens and ensuring inclusive growth for all – **“Sabka Saath Sabka Vikas aur Sabka Vishwas”**.
 - The ADP is essentially aimed at **localizing [Sustainable Development Goals](#)**, leading to the progress of the nation.
- **Parameters for Ranking:**
 - The ranking is based on the incremental progress made across 49 Key Performance Indicators (KPIs) under **5 broad socio-economic themes** -
 - **Health & Nutrition (30%)**
 - **Education (30%)**
 - **Agriculture & Water Resources (20%)**
 - **Financial Inclusion & Skill Development (10%)**
 - **Infrastructure (10%)**
- **Various Programmes:**
 - Various programmes such as – **Saksham Bitiyan Abhiyan**, [Anemia Mukh Bharat](#) and [Surakshit Hum Surakshit Tum](#), are some of the flagship initiatives that have been taken up by [NITI Aayog](#) in this regard.
- **Challenges Associated with ADP**
 - **Insufficient Budgetary Resources:**
 - ADP is affected by the issue pertaining to **insufficient budgetary resources**.
 - **Lack of Coordination:**
 - ADP is implemented by **multiple ministries which leads to a lack of coordination**.
 - **Data High-quality administrative data:**
 - Data High-quality administrative data is critical to improving programme implementation and design at the local level.
 - **Ranking Method:**
 - The [Delta ranking](#) **itself is largely focused on assessing quantity** (that is, coverage of access) rather than quality.
 - **Quality of Education:**
 - Also, the quality of education in India is in a dismal condition, as highlighted by [the ASER report](#).

Way Forward

- A **more simplified ranking index** is needed with a few carefully chosen output and outcome measures which can more clearly signal national development targets.
- **Financial autonomy** to local governments should be provided.
- **Independent surveys** can be used to validate administrative data, this will help improve data quality.
- Building each **district's internal capacity** to produce reliable and actionable data, and promoting a culture of data use, can be made a priority for the ADP.

UPSC Civil Services Examination, Previous year Question (PYQ)

Q. Atal Innovation Mission is set up under the (2019)

- (a) Department of Science and Technology
- (b) Ministry of Labour and Employment
- (c) NITI Aayog
- (d) Ministry of Skill Development and Entrepreneurship

Ans: (c)

Exp:

- The Atal Innovation Mission (AIM) is a flagship initiative set up by the NITI Aayog to promote innovation and entrepreneurship based on a detailed study and deliberations on innovation and entrepreneurial needs of the country.
- AIM is envisaged as an umbrella innovation organization that would play an instrumental role in alignment of innovation policies between Central, State and sectoral innovation schemes incentivizing the establishment and promotion of an ecosystem of innovation and entrepreneurship at various levels – higher secondary schools, science, engineering and higher academic institutions, SME/MSME industry, corporate and NGO levels.
- **Therefore, option (c) is the correct answer.**

Source: HT

World Mental Health Report: WHO

For Prelims: WHO, Comprehensive Mental Health Action Plan, Manodarpan

For Mains: Issue of Mental Health

Why in News?

Recently the [World Health Organization \(WHO\)](#) released the **World Mental Health Report**.

What are the highlights of the report?

- WHO has called for more action on addressing mental health issues worldwide, especially now that the 'Covid-19' **pandemic** has been cited as contributing to **worsening mental health**.
- Almost a billion people, 14% of whom were adolescents, were living with some form of mental health issues in 2019. For some, this resulted in dying by suicide which accounted for one in 100 deaths, with more than half of them happening before the age of 50.
- Depression and anxiety spiked 25 % in the first year of the pandemic (2020).
- All 194 WHO member states have adopted the [Comprehensive Mental Health Action Plan 2013-2030](#) but progress has been slow.
- Other **structural threats** to mental well-being besides the pandemic include social and economic inequalities, public health emergencies, war and the climate crisis.
- Those living with mental health issues **live some two decades less than the general population**.
- Access to mental health services remains poor. Globally, **71% of psychosis patients don't receive treatment**. High-income countries provide treatment to 70% psychosis patients and low-income countries manage the same for just 12%.

- The WHO's report **lists three key 'paths to transformation'** to quicken progress on the Comprehensive Mental Health Action Plan 2013–2030.
 - These include more focussed investment in **mental health, reshaping environments** such as homes, communities, schools, workplaces and health care services that influence mental health and **strengthening the quality of mental health care** by diversifying it.

What is Mental health?

- According to the **World Health Organization (WHO)**, mental health is a **state of well-being** in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.'
- **Like Physical health, Mental health is also important** at every stage of life, from childhood and adolescence through adulthood.

What are the Challenges related to Mental Health?

- **High Public Health Burden:** An estimated **150 million people across India** are in need of mental health care interventions, according to India's latest **National Mental Health Survey 2015-16**.
- **Lack of Resources: Low proportion of the mental health workforce** in India (per 100,000 population) include psychiatrists (0.3), nurses (0.12), psychologists (0.07) and social workers (0.07).
 - **Low financial resource allocation** of just over a percent of **Gross Domestic Product** on healthcare has created impediments in public access to affordable mental healthcare.
- **Other Challenges: Poor awareness about the symptoms of mental illness**, social stigma and abandonment of mentally ill, especially old and destitute, leads to social isolation and reluctance on part of family members to seek treatment for the patient.
 - This has resulted in a massive **treatment gap**, which further worsens the present mental illness of a person.
- **Post-Treatment gap:** There is **need for proper rehabilitation** of the mentally ill persons post his/her treatment which is currently not present.
- **Rise in Severity:** Mental health problems tend to **increase during economic downturns**, therefore special attention is needed during times of economic distress.

What are the Steps Taken by the Government for Promoting Mental Health?

- **Constitutional Provision:** SC has held healthcare to be a fundamental right under **Article 21** of the Constitution.
- **National Mental Health Program (NMHP):** To address the huge burden of mental disorders and shortage of qualified professionals in the field of mental health, the government has been implementing the **National Mental Health Program (NMHP) since 1982**.
 - The Program was **re-strategized in 2003** to include two schemes, viz. Modernization of State Mental Hospitals and Up-gradation of Psychiatric Wings of Medical Colleges/General Hospitals.
- **Mental HealthCare Act 2017:** It guarantees **every affected person access to mental healthcare** and treatment from services run or funded by the government.
 - It has significantly reduced the scope for the use of Section 309 IPC and made the attempt to commit suicide punishable only as an exception.
- **Kiran Helpline:** In 2020, the Ministry of Social Justice and Empowerment launched a **24/7 toll-free helpline 'Kiran'** to provide support to people facing anxiety, stress, depression, suicidal thoughts and other mental health concerns.
- **Manodarpan:** The Ministry of Human Resources Development (MHRD) launched it under **Atmanirbhar Bharat Abhiyan**. It is aimed to provide **psychosocial support to students, family members and teachers** for their mental health and well-being during the times of **Covid-19**.

Way Forward

- **Mental health situation in India** demands active policy interventions and resource allocation by the government.
- To reduce the **stigma around mental health**, we need measures to train and sensitize the community/society.
- When it **comes to providing the right care to patients** with mental illness, we need mental health care intervention to the patients, we need innovative models to deepen the penetration of services and staff.
 - One such model is [Accredited Social Health Activist \(ASHA\)](#) by the ministry of health and family welfare.
- India needs a **constant stream of funds for educating and creating awareness** about mental health and chronic issues around it.
- The need of the hour is to provoke masses to learn about mental health through campaigns like **Swachh Mansikta Abhiyan**.

[Source: DTE](#)

Renewables 2022 Global Status Report (GSR 2022)

For Prelims: REN21, National Solar Mission (NSM), National Hydrogen Energy Mission (NHEM), United Nations Climate Change Conference (COP26)

For Mains: Government Policies & Interventions, Environment Pollution and Degradation

Why in News?

Recently the Renewables 2022 Global Status Report (GSR 2022) was released by **REN21 (Renewable Energy Policy Network for the 21st Century)**.

- REN21 is a **global collective of renewable energy actors**.
- It includes **scientists, governments such as India's, [non-governmental organisations](#)** and members of the industry who collated data on renewable energy installations, markets, investments and policies in countries across the world.

What is Renewables 2022 Global Status Report (GSR 2022)?

- The Renewables 2022 Global Status Report **documents the progress made in the renewable energy sector**.
- It highlights the **opportunities afforded by a renewable-based economy and society**, including the ability to achieve more diversified and inclusive energy governance through localised energy generation and value chains.
- Countries with higher shares of renewables in their total energy consumption enjoy a greater level of energy independence and security.

What are the key Highlights of the Report?

- **Global Overview:**
 - This Report sends a **clear warning** that the **global clean energy transition is not happening**, making it unlikely that the world will be able to meet critical climate goals this decade.
 - Although many more governments committed to **net zero greenhouse gas** emissions in

2021, the reality is that, in response to the energy crisis, **most countries have gone back to seeking out new sources of fossil fuels and to burning even more coal, oil and natural gas.**

- **For the first time, GSR 2022 provides a world map of renewable energy shares by country** and highlights progress in some of the leading countries.
- In the lead-up to the [United Nations Climate Change Conference \(COP26\)](#) in November 2021, a **record 135 countries pledged to achieve net zero** greenhouse gas emissions by 2050.
 - However, **only 84 of these countries had economy-wide targets** for renewable energy, and only 36 had targets for 100 % renewables.

▪ **India's Performance:**

- **Renewable Energy:** India ranked **third** in renewable energy installations in 2021, **after China and Russia.**
- **Hydropower Capacity:** India added **843 MW** of hydropower capacity in **2021**, raising the total capacity to 45.3 GW.
- **New Solar PV Capacity:** India was the **second largest market in Asia** for new solar PV capacity **and third globally** (13 GW of additions in 2021).
- **Total Installations:** It **ranked fourth** for total installations (60.4 GW), **overtaking Germany** (59.2 GW) for the first time.
- **Wind Power:** India ranked **third globally** for the total installed capacity of wind power (40.1 GW), behind China, the US and Germany.

What are the Initiatives taken by India to Promote Renewable Energy?

- [National Solar Mission \(NSM\)](#): The 100 GW solar ambition at the heart of the world's largest renewable energy expansion programme.
- **The Wind Energy Revolution:** Leveraging **India's robust wind energy sector to boost clean energy manufacturing** and the rural economy
- [National Biofuels Policy and SATAT](#): Building value chains to reduce fuel imports, increase clean energy, manage waste, and create jobs
- [International Solar Alliance \(ISA\)](#): Harnessing the **infinite power for the Sun** for sustainable human development.
- [Small Hydro Power \(SHP\)](#): Harnessing the **power of water to integrate remote communities** into the economic mainstream.
- [National Hydrogen Energy Mission \(NHEM\)](#): **Exploring the commercial viability** of a versatile clean fuel.
- [Production-Linked Incentive \(PLI\) Scheme](#): Integrating India into the global clean energy value chains

What are Hurdles in India's Transitions towards Renewable Energy?

- **Poor Financial Condition of Discoms:**
 - The most important challenge for further scaling up renewables in India is the poor financial condition of power distribution companies (discoms), most of which are owned by state governments. Almost all **renewable energy is purchased by such discoms, resulting in very long and unsustainable payment cycles.**
- **Variability in its Generation:**
 - The variability in its generation **due to weather conditions makes operating the transmission grid a technically demanding task.** Until recently, RE power capacity was small, but now RE projects are producing so much power that they are sometimes required to reduce or switch off generation to ensure that the grid is operating smoothly.
- **Weak Transmission Grid:**
 - The **weak transmission grid in the country has also been a challenge**, especially in the case of RE projects, which are often set up in remote areas, and away from large cities and consumption centres.
 - For example, **ambitious plans to build large solar projects in Leh were recently cancelled** citing weak transmission infrastructure.
- **Nascent Technology:**
 - India **does not possess the required technology** which is **needed in this area**, for

example India is dependent on foreign players for import of Photovoltaic solar cells.

- **Impact on Environment:**

- While RE generation is zero-carbon (barring some biofuels), there are **emissions at other points of its lifecycle**, such as during **raw material extraction and equipment manufacturing**. There are also RE's detrimental impacts on biodiversity and ecology.

- **Shortage of Skilled Personnel:**

- India's power sector has always faced shortage of skilled personnel, **not only in the private sector but also within DISCOMs**, grid management companies, regulators and policymakers and this problem is being compounded further in the current scenario.

- **Installation Cost Issue:**

- The **high initial cost of installation** is one of the major hurdles in the development of renewable energy. Although the development of a coal plant requires high investment, it is known that **wind and solar power plants also require huge investment**.
- In addition to this, **storage systems of the generated energy are expensive** and represent a real challenge in terms of megawatt production.

Way Forward

- **Global Partnerships:** Global partnerships can open new channels of **support through technology or financial resources being shared**.
- **Distributed Renewable Energy (DRE):** Distributed RE - in which power from renewable sources is generated near points of use instead of centralised plants - can **help achieve the Global South's ambitious renewable energy targets** as well as increase access to reliable and modern energy, if a favourable regulatory and policy environment is created.
- **RE as a Responsible Energy:** RE shouldn't stand merely for renewable energy but also for responsible energy.
 - To avoid negative impacts, the RE industry must act on four principles:
 - Actively **promoting universal labour, land, and human rights**,
 - Protecting restoring and nurturing **resilient, thriving ecological systems**,
 - Committing to **participatory governance principles**,
 - Recognising that **resilient communities and an inclusive workforce** are critical to their success.
- **Climate Financing:** **It will help energy-poor countries which need funding** to accelerate their carbon-cutting goals and invest in new technologies to decouple their growth trajectories from fossil fuels.

UPSC Civil Services Examination, Previous year Question (PYQ)

Q. The term 'Domestic Content Requirement' is sometimes seen in the news with reference to (2017)

- (a) Developing solar power production in our country.
- (b) Granting licences to foreign T.V. channels in our country.
- (c) Exporting our food products to other countries.
- (d) Permitting foreign educational institutions to set up their campuses in our country.

Ans: (a)

Exp:

- National Solar Mission was **started in 2010** which aims at deploying solar power across the country and also mandates to ensure development across the entire value chain. Hence, developing domestic manufacturing capacity across the value chain is also one of the thrust areas of the Mission.
- To ensure the development of domestic manufacturing, provision of 'Domestic Content Requirement' was introduced under the Mission. The provision required the solar energy producer to use locally manufactured cells. Subsidies were offered to those developers who would use domestic equipments.

- However, India lost the case against the US at WTO as the body ruled that India's Domestic Content Requirement provisions were inconsistent with the international norms.
- **Therefore, option (a) is the correct answer.**

[Source: DTE](#)

Bamboo-Dwelling Bat

Why in News?

Recently, Scientists have discovered **a new species of bamboo-dwelling bat** near the [Nongkhyllam Wildlife Sanctuary](#).

What do we Need to Know about Newly Discovered Species?

- The new species of **bamboo-dwelling bat** has been named ***Glischropus meghalayanus***.
 - **Bamboo-dwelling bats** are a particular kind of bat living in the internodes of bamboo with specialised morphological characters that help them to adapt to the life inside a bamboo plant.
- It is **small in size and has a dark brown colour** with sulphur yellow belly.
- The present discovery is the **first report of a thick-thumbed bat** not only from India but also from South Asia.



What are Thick-Thumbed Bats?

- This bat has typical **fleshy pads on the thumb and soles of feet** which aid them to crawl over smooth surfaces of bamboo internodes.
- Thick-thumbed bats of the **genus *Glischropus*** are currently composed of four recognized species from Southeast Asia.

- ***G. aquilus*** is endemic to Sumatra, ***G. javanus*** is restricted to western Java, whereas ***G. bucephalus*** is widely distributed north to the Isthmus of Kra and ***G. tylopus*** is widespread south to this zoogeographic boundary.
- Earlier, a new species of thick-thumbed bat (Chiroptera: Vespertilionidae: Glischropus) from Meghalaya, north-eastern India was discovered.

What are the Recent Discoveries of Bats from Meghalaya?

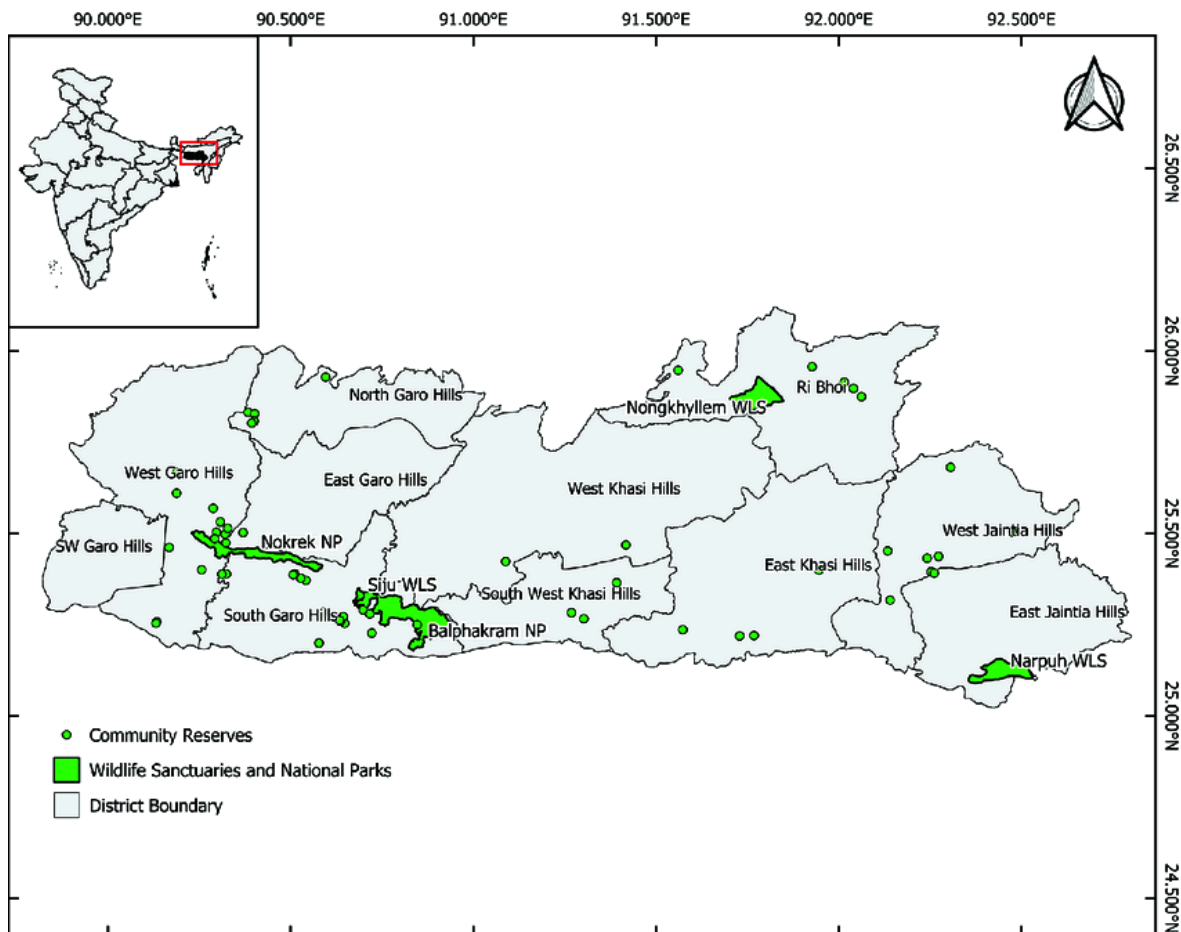
- From the same forested patches outside **Nongkhylllem Wildlife Sanctuary**, another species of **disk-footed bat *Eudiscopus denticulus*** was found which was a new record in India.
- In the past few years, **three bamboo-dwelling bats** have been reported from the area which highlights the ecological significance of the region.
 - Since the bamboo forest around the wildlife sanctuary has a rich bio-diversity there should be attempts to conserve it.

What is the Number of Bat Species in India?

- **Total Number:**
 - With this new discovery, the total number of bat species known from India stands at **131**.
- **Highest Bat Diversity:**
 - **Meghalaya** harbors **the highest bat diversity** in the country with **67 species**, which is about 51% of total bat species in the country.
 - Meghalaya, because of its **unique terrain, vegetation and climate condition**, was a haven for both flora and fauna.
 - The unique caves in the northeastern State provided roosting opportunities for a large number of bats.
 - There were a number of **cave-dwelling bats species from Meghalaya**, the most common being **Horseshoe bat and Leaf-nosed bats**.

Nongkhylllem Wildlife Sanctuary

- Situated in the Ri-Bhoi district near Lailad village and spread over an area of 29 sq. kms, Nongkhylllem Wildlife Sanctuary is one of the famous attractions of Meghalaya.
- The Sanctuary falls in the **Eastern Himalayan Global biodiversity hotspot**.
- The sanctuary supports different species of fauna such as Royal Bengal Tiger, [Clouded Leopard](#), [Indian Bison](#), and Himalayan Black Bear etc.
- Among the birds, the rare species which can be spotted here are Manipur Bush Quail, Rufous Necked Hornbill and Brown Hornbill.
- **Other Wildlife Sanctuary in Meghalaya:**
 - Siju Wildlife Sanctuary
 - Narpuh Wildlife Sanctuary
 - Baghmara Pitcher Plant Sanctuary
 - [Nokrek National Park](#)



UPSC Civil Services, Previous Year Questions (PYQ)

Q. Recently, our scientists have discovered a new and distinct species of banana plant which attains a height of about 11 meters and has orange coloured fruit pulp. In which part of India has it been discovered? (2016)

- (a) Andaman Islands
- (b) Anaimalai Forests
- (c) Maikala Hills
- (d) Tropical rain forests of northeast

Ans: (a)

Exp:

- A new species of banana, *Musa idandamanensis* was discovered by a team of scientists from the Botanical Survey of India (BSI) from a remote Krishna Nalah tropical rain forest on the Little Andaman Islands.
- Its flowers are cylindrical in shape compared to the conical shape of regular banana species.
- It is about 11 metres high, whereas the usual banana species is about three to four metres high.
- The species is edible and very sweet. The fruit pulp is orange in colour, distinctive from the white and yellow colour of regular bananas.
- Therefore, option (a) is the correct answer.

Theri Desert

Why in News?

There are couple of theories that are being debated regarding the formation of Theri desert , the most plausible being the role of [south west monsoonal winds](#).

What is the Theri Desert?

- It is a **small desert** situated in the state of **Tamil Nadu**. It **consists of red sand dunes** and is confined to **Thoothukudi district**.
- The red dunes are called **theri in Tamil**. They consist of sediments dating back to the **Quaternary Period** (began 2.6 million years ago) and are made of marine deposits.
- They **have very low water and nutrient retention capacity**. The dunes are susceptible to aerodynamic lift. This is the push that lets something move up. It is the force that is the opposite of weight.

What is the Mineral Composition of Theri?

- The petrographical study (petrography is the study of composition and properties of rocks) and X-ray diffraction analysis (a method used to determine a material's crystallographic structure) of the red sand dunes reveal the presence of heavy and light minerals.
- These include: Ilmenite, Magnetite, Rutile, Garnet, Zircon, Diopside, Tourmaline, Hematite, Goethite, Kyanite, Quartz, Feldspar and Biotite.
- The iron-rich heavy **minerals like ilmenite, magnetite, garnet, hypersthene and rutile present in the soil had undergone leaching by surface water** and were then oxidised because of the favourable semi-arid climatic conditions.
- It was **due to these processes** that the **dunes** near Tiruchendur, a coastal town of Thoothukudi district are **red-coloured**.

How Theri Dunes Were formed?

- Theri appears as gentle, undulating terrain. The **lithology** (the study of general physical characteristics of rocks) **that the area might have been a paleo (ancient) coast in the past**. The presence of limestone in many places indicates marine transgression.
- The present-day theris might have been formed by the confinement of beach sand locally, after regression of the sea. When high velocity winds from the Western Ghats blew east, they induced migration of sand grains and accumulation of dunes.
- **Another view is that these are geological formations** that appeared in a period of a few hundred years.
- There is a lot of red sand spread over these theris. The **red sand is brought from the surface of a broad belt of red loam in the plains** of the Nanguneri region (about 57 kilometres from this area in Tirunelveli district) **by south west monsoon winds** during May-September.
- Deforestation and absence of vegetative cover are considered to be the major causes of wind erosion.
- When the dry monsoon wind blows with high velocity, the red loam is churned and driven east in huge columns of red sand, till they are met by sea breeze near the coastal tract of Tiruchendur and get deposited there.
- These **processes of erosion, transport and deposit of sediments** that are **caused by wind** at or near the surface of the earth, are called [Aeolian processes](#). They lead to continual sand redistribution.

Source: DTE

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