

ENERGISING INDIA-NEPAL TIES, THE HYDRO-POWER WAY

Context

- The National Hydro Electric Power Corporation of India (NHPC) recently signed MoU with Investment Board Nepal (IBN) to develop 750 MW West Seti and 450 MW Seti River (SR6) Hydroelectric Projects in western Nepal (a total of 1,200 MW).
- The projects have been awarded to India nearly 4 years after China withdrew from these.
- The article discusses the offerings to India with regards to the India- Nepal cooperation, shared concerns, common interests and options and alternatives available for collaboration.

Background

- **Announcement:** The development comes after Nepal and India in early 2022 issued a **Joint Vision Statement on Energy**, which talks about expanding mutually beneficial bilateral cooperation in the power sector including joint development of power generation projects in Nepal.
 - It also entails development of cross-border transmission infrastructure
 - Bi-directional power trade with access to electricity markets in both countries
 - Coordinated operation of national grids
 - Institutional cooperation in sharing latest operational information, technology and know-how.
- **About latest MoU:** The total cost of these projects is expected to be around \$2.4 billion. The NHPC has initiated a preliminary engagement of the site with an investment of over ₹18,000 crore and has also signed MoU with the Power Trading Corporation Limited, India for sale of power.
- **Significance:** The signing of the MoU will pave the way for the NHPC to carry out the project study, hydrological study in two rivers, geo-technical survey, and drilling work among other things before starting the construction work.
- **Earlier projects:** India is already involved in the **Mahakali Treaty** (6,480 MW), the **Upper Karnali Project** (900 MW) and the **Arun Three projects** (900 MW) in western and eastern Nepal, respectively.

- **Concerns:** While awarding the West Seti and SR-2 projects to the NHPC Limited, some leaders in Nepal had raised concerns that the government did not opt for a competitive bidding process.
 - But the government remarked that since West Seti is a **national priority project**, it needs to be expedited and the contract can also be awarded through negotiations.

Many hurdles

- **Conception:** Historically, the 750MW West Seti Hydroelectric Project was thought of in the early 1980s as a 37 MW run-of-the-river
- **Early License:** Nepal issued the developing license to French company, which prepared a pre-feasibility study in 1987 proposing the scheme without building a dam.
- **Project transfer:** With the project failing to see the light of the day, an Australian Corporation acquired a majority stake in the early 1990s but attempts to make progress were affected due to investment and environmental concerns.
- **In Chinese hands:** Consequently, the China stepped in 2009, with Australian Corporation holding a majority stake. However, Chinese Corporation withdrew citing a poor investment environment.
 - In 2011, Nepal revoked the licence of the West Seti Hydropower Company Limited in which Australian Corporation had a majority stake, and handed it over to China, but Chinese corporation again withdrew in 2018, citing issues of resettlement and rehabilitation.
 - Nepal was thus left in a fix after two Chinese companies withdrew from the projects, after signing the MoUs with the government.
- **Rallying domestic supplies:** Subsequently, Nepal tried to develop the project by mobilising internal resources. However, increased costs resulted in further delays.
 - Meanwhile, the project was remodelled as the West Seti and Seti River (SR6) joint storage project (1,200 MW).

THE NASA SPACECRAFT-ASTEROID COLLISION

In News:

- A National Aeronautics and Space Administration (NASA) spacecraft recently rammed an asteroid at lightning speed in an unprecedented trial run for the day when a killer rock threatens Earth.
- The **DART (Double Asteroid Redirection Test)** spacecraft collided with the space rock Dimorphos.

About the NASA's mission:

- Double Asteroid Redirection Test (DART) is a NASA space mission **aimed at testing a method of planetary defence against near-Earth objects (NEOs)**.
- It is the **first-ever mission** dedicated to investigating and **demonstrating one method of asteroid deflection** by changing an asteroid's motion in space through kinetic impact.
 - An asteroid is a minor planet of the inner Solar System.
 - Asteroids range in size and shape from 1-metre rocks to a dwarf planet nearly 1000 km in diameter.
 - They are metallic or rocky bodies with no atmosphere.
- The auto-rickshaw sized 600 kgs probe - DART, was launched from Earth in 2021, and it recently collided with football stadium-sized **Dimorphos** (about five billion kgs in mass), orbiting around the 780 metres wide primary asteroid **Didymos** (which poses no actual threat to Earth).
 - NASA has **confirmed that the collision deflected** the pair of space rocks' trajectory.
 - This method of kinetic impact is also known as the '**kick**'
- DART is a **joint project** between NASA and the Johns Hopkins Applied Physics Laboratory (APL), Maryland, US.
- **International partners** include the European Space Agency (ESA), the Italian Space Agency (ASI), and the Japan Aerospace Exploration Agency (JAXA), contributing to related or subsequent projects.

Significance of this mission:

- It may one day **save humanity from a potentially catastrophic collision** by safely deflecting a deadly asteroid on its way to Earth.
- **For example**, following NASA's lead, China plans to deflect 2020 PN1 in 2026 - a 40m diameter earth-crossing asteroid.
- It could also **fuel space mining technologies** and kickstart the space economy in the coming decades.
- The 'kick' technique that deflects asteroids can then be used to move a small asteroid into a convenient position for space mining.
- **Rare earth elements** such as yttrium, niobium, rhodium, palladium, osmium, iridium and scandium **are critical for developing green energy technologies** such as electric vehicles, solar panels, wind turbines, etc., ushering a low carbon economy in the future.
- Mining for rare earth elements has a high environmental cost and they are in short supply.
- Penalties for pollution may make space mining economically viable in the coming years.
- NASA's **Asteroid Redirect Mission (ARM)**, which has been axed, aimed at bringing a 20-tonne space rock close to Earth for study and mining.
- In some ways, the DART mission is also included in this frame.

DADASAHEB PHALKE AWARD

Legendary actress Asha Parekh will be honoured with Dadasaheb Phalke Award for the year 2020.



About:

- Asha Parekh is a renowned film actress, director and producer and an accomplished Indian classical dancer. Ms. Parekh is also a winner of Padma Shri, which was awarded to her in 1992.
- She has also served as the head of Central Board for Film Certification from 1998-2001.
- The Dadasaheb Phalke Award is India's highest award in the field of cinema.
- It is presented annually at the National Film Awards ceremony by the Directorate of Film Festivals, an organisation set up by the Ministry of Information and Broadcasting.

- The recipient is honoured for their "outstanding contribution to the growth and development of Indian cinema". The award comprises a Swarna Kamal (Golden Lotus) medallion, a shawl, and a cash prize of ₹1,000,000.
 - The award was introduced by the Government of India to commemorate Dadasaheb Phalke's contribution to Indian cinema, who is popularly known as and often regarded as "the father of Indian cinema".
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HURRICANE IAN

Hurricane Ian has made landfall in western Cuba as a category three storm, bringing wind speeds of up to 205 kilometres per hour.



About:

- A hurricane is a type of storm called a tropical cyclone, which forms over tropical or subtropical waters.
 - A tropical cyclone is a rotating low-pressure weather system that has organized thunderstorms but no fronts (a boundary separating two air masses of different densities).
 - Tropical cyclones with maximum sustained surface winds of less than 39 miles per hour (mph) are called tropical depressions. Those with maximum sustained winds of 39 mph or higher are called tropical storms.
 - When a storm's maximum sustained winds reach 74 mph, it is called a hurricane.
 - Hurricanes originate in the Atlantic basin, which includes the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico, the eastern North Pacific Ocean, and, less frequently, the central North Pacific Ocean.
 - "Hurricane Season" begins on June 1 and ends on November 30, although hurricanes can, and have, occurred outside of this time frame.
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POPULAR FRONT OF INDIA (PFI) BANNED FOR UNLAWFUL ACTIVITIES

The Central Government has declared Popular Front of India (PFI) and its associates and affiliates as an unlawful association with immediate effect for a period of five years.

About:

- Union Home Ministry said the PFI and its associates and affiliates including Rehab India Foundation, Campus Front of India, All India Imams Council, National Confederation of Human Rights Organization, National Women's Front, and Rehab Foundation, Kerala have been involved in the violent terrorist activities with an intent to create a reign of terror in the country.
- If there is no immediate curb of unlawful activities of the PFI and related fronts, they will use this opportunity to continue its subversive activities thereby disturbing public order and undermining the constitutional setup of the country.
- Recently, the National Investigation Agency, Enforcement Directorate, and State Police carried out a joint operation at premises linked to PFI in several states. Several PFI leaders and functionaries were arrested in the raids.

BHAGAT SINGH AIRPORT

PM Narendra Modi on Sunday announced the decision to rename Chandigarh airport after Shaheed Bhagat Singh. The decision has been taken just days before the iconic freedom fighter's birth anniversary, which falls on September 28.



About:

- The decision has been taken just days before the iconic freedom fighter's birth anniversary, which falls on September 28. Born on September 28, 1907, in pre-partition Punjab's Banga, Bhagat Singh was a charismatic revolutionary freedom fighter.
- The massacre of Jallianwala Bagh deeply impacted Bhagat Singh. At a young age, he decided to dedicate his life to the country.
- He joined the Hindustan Socialist Republican Association. Bhagat Singh was also part of the Young Revolutionary Movement and supported the violent overthrow of the British Government in India.

- Bhagat Singh and his associates threw low-grade explosives in the Central Legislative Assembly. The intention behind the bombings was not to injure anyone but to get arrested so that they take their cause for India's freedom to the public.
 - Bhagat Singh was executed by British Empire on March 23, 1931, along with his friends Rajguru and Sukhdev.
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LIVE STREAMING OF SUPREME COURT

In a first, three separate Constitution Bench proceedings in the Supreme Court were simultaneously beamed live through YouTube.



About:

- Statistics show that more than eight lakh viewers watched the proceedings before the three Constitution Benches.
 - Live-streaming has become a reality nearly four years after the court's Swapnil Tripathi judgment of 2018. The judgment had upheld the plea for live-streaming of its proceedings.
 - The court had said live-streaming would “virtually” expand the court beyond the four walls of the courtroom. “Live-streaming of court proceedings has the potential of throwing up an option to the public to witness live court proceedings,” the court had said.
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ARRIVAL OF FOREIGN TOURISTS TOOK BIG HIT IN 2021, DATA SHOW

In News:

- Recently, Vice-President of India, Shri Jagdeep Dhankar, released the **Indian Tourism Statistics 2022 report**.
 - The Vice-President also gave away the National Tourism Awards for 2018-19 with **Uttarakhand, Maharashtra and Telangana** getting the top three places, respectively.
 - The awards were given after a gap of two years due to the disruption caused by the **Covid-19 pandemic**.
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Major Highlights of the Indian Tourism Statistic Report (2022):

• Foreign Tourists –

- In 2020, 2.74 million foreign tourists had visited India. In 2021, the number came down to 1.52 million.
- In 2021, the top 15 countries from which foreign tourists arrived in India included – the U.S., the U.K., Bangladesh, Canada, Nepal, Afghanistan and Australia.
- However, the arrival of Non-Resident Indians (NRIs) has increased by 52.6% in 2021 as compared to 2020.

• Contribution to foreign exchange earnings –

- The statistics further show that tourism continues to be an important foreign exchange earner for the country.
- In 2021, foreign exchange earnings from tourism amounted to **\$8.797 billion** as compared to **\$6.959 billion** in 2020.

• Domestic Tourists –

- While in 2020, the number of domestic tourists was 610 million, in 2021 it was 677 million.

• Indians departing from India –

- Interestingly, the number of Indian nationals departing the country saw a rise in 2021 as compared to 2020.
- In 2021, 8.55 million Indian nationals departed the country as compared to 7.29 million in 2020.
- The **UAE** was the top destination for Indians in 2021, followed by the U.S., Qatar, Oman and the U.K.

National Tourism Awards:

- The Ministry of Tourism organised the National Tourism awards.
- A total of 81 awards were given away this year highlighting the achievements of the tourism industry in **2018-19**.
- The awards are presented to various segments of the travel, tourism and hospitality industry, including State Governments in recognition of their performance in their respective fields.

Major Schemes for Tourism promotion in India:

- **Swadesh Darshan Scheme –**
 - Launched in 2014-15, the scheme aims to promote **theme-based tourist circuits** to harness the potential of tourism in India.
 - **15 thematic circuits** have been identified under the Swadesh Darshan for development.
 - Buddhist Circuit, Coastal Circuit, Desert Circuit, Eco Circuit, Heritage Circuit, Himalayan Circuit, Krishna Circuit, North East Circuit, Ramayana Circuit, Rural Circuit, Spiritual Circuit, Sufi Circuit, Tirthankar Circuit, Tribal Circuit, Wildlife Circuit
 - Under the scheme, the Ministry of Tourism provides Central Financial Assistance to State Governments, Union Territory Administrations for the infrastructure development of circuits.
 - This scheme is envisioned to synergise with other schemes like Swachh Bharat Abhiyan, Skill India, Make in India etc. with the idea of positioning the tourism sector as a major engine for job creation.
- **Prashad Scheme –**
 - Prashad is an acronym for Pilgrimage Rejuvenation And Spirituality Augmentation Drive.
 - The scheme was launched in 2015 with the objective of holistic development of identified pilgrimage destinations.

BORDER SECURITY

Since the standoff with China along the Line of Actual Control (LAC) in Eastern Ladakh



in May 2020, the Army has deployed its entire range of medium-range artillery guns and long-range rockets in the region to augment its long range fire power as part of the reorientation towards the northern borders.

About:

- The Army is now in the process of procuring another 100 K9-Vajra howitzers, which has already been approved by the Defence Ministry.



CROSS & CLIMB ROHTAK



- The Regiment of Artillery is also in the process of inducting loitering mutations, while it is also looking at procuring tactical Unmanned Aerial Vehicles (UAV). Pinaka Multi-Rocket Launch System (MRLS) has been operationalised.
 - The Army plans to convert all its artillery regiments to medium range by converting it to 155 mm standard. The process of completing the mediumisation process is likely to be achieved sometime around 2040.
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