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सत्यमेव जयते



MK Yadav Sir

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BUSINESS STANDARD Page 4

INDIA-EFTA

(Syllabus: GS Paper 3 - Economy)

'EFTA, India aim at building on existing work'

India and the European Free Trade Association (EFTA) member states (Iceland, Liechtenstein, Norway, and Switzerland) last week held discussions to resume negotiations for a Trade and Economic Partnership Agreement that was abandoned in 2013 after five years of negotiations. Swiss State Secretary for Economic Affairs **HELENE BUDLIGER ARTIEDA** – who led the delegation to India – in an email interview with **Asit Ranjan Mishra**, says both sides need to acknowledge the change in geopolitical circumstances while restarting negotiations. Edited excerpts:

India and EFTA recently discussed the resumption of trade talks. Have both sides formally agreed to start negotiations? What are the timelines?
There is a shared will to bring these negotiations to a successful conclusion as soon as possible. Negotiations have been ongoing since 2008 and we are advanced in many areas. On the outstanding areas, experts will need to sit down and find solutions.

Have both sides zeroed in on the chapters to be included in the deal?
There is a shared understanding of the scope of the agreement. We aim at building on existing work and conclude a comprehensive agreement. It is important to note that all parties to this process approach the negotiation table with a strong conviction that any deal must be balanced and fair.

Q&A

HELENE BUDLIGER ARTIEDA
Swiss State Secretary for Economic Affairs

negotiations stand quiet at the beginning.

What will be the core focus areas in the trade talks from the EFTA side?
The main outstanding issues concern market access for trade in services, intellectual property rights, and rules of origin.

What are the opportunities India will be able to tap into through a trade deal with EFTA?
A trade agreement would benefit both sides by way of enhancing trade, promoting technology and knowledge transfer, facilitating research and development and innovation, and encouraging business collaboration leading to more investments.

Improved market access for goods will boost India's export potential to EFTA markets. EFTA

Context: India and the European Free Trade Association (EFTA) member states (Iceland, Liechtenstein, Norway, and Switzerland) held discussions to resume negotiations for a Trade and Economic Partnership Agreement that was abandoned in 2013 after five years of negotiations.

European Free Trade Association (EFTA)

- It is the intergovernmental organization of **Iceland, Liechtenstein, Norway, and Switzerland.**
  - These countries are **not part of the European Union (EU).**
- It was **set up in 1960** by its then seven Member States for the promotion of free trade and economic integration between its members.
- EFTA was founded by the **Stockholm Convention in 1960.**
- EFTA was founded as an **alternative for states** that did not wish to join the European Community (EC).
- EFTA was founded by the **Stockholm Convention on May 3, 1960,** with Austria, Denmark, Great Britain, Norway, Portugal, Sweden, and Switzerland as its founding members.

India-EFTA

- Negotiations on a broad-based **Trade and Investment Agreement (TEPA)** between the EFTA States and India were officially **launched in January 2008 f**ollowing consideration of the recommendations of a Joint EFTA-India Study Group.
- **13 rounds of negotiations** were held until autumn 2013 before negotiations were put on hold.
- After talks were resumed in October 2016, four more rounds have taken place.
- The TEPA is a **comprehensive agreement** that addresses investment, intellectual property rights, government procurement, trade facilitation, trade remedies, dispute resolution, and other areas of shared interest. It also includes trade in products and services, as well as investment and investment-related issues.
- EFTA represents around **2.5% of India's total merchandise trade** in 2020–21, ranking as its ninth-largest trading partner.

PIB

MAY 1

ANJI KHAD BRIDGE

(Syllabus: GS Paper 3 - Infrastructure)

PM praises completion of Anji Khad bridge, India's first cable stayed rail bridge

Context: The Prime Minister has praised the completion of **Anji Khad bridge, India's first cable stayed rail bridge.**

- The bridge was completed in 11 months and total length of cable strand used in the **bridge is 653 km.**

Anji Khad Bridge

- **About**: Anji Bridge, the first cable-stayed railway bridge in the country, is part of the **Udhampur-Srinagar-Baramulla Rail Link (USBRL) project.**
  - **Hindustan Construction Company (HCC)** is building the bridge.
  - It is located in the **young fold mountains of Himalaya,** with extremely daunting geological conditions.
- **Segments**: These include the building of the:
  - Katra-Udhampur segment,
  - The Quazigund-Baramulla segment,
  - Quazigund-Banihal segment, etc.
- **Key Features**: The **1,315-metre-long bridge** can withstand strong winds of up to 266 km/h as well as earthquakes of great intensity.
  - It is at a **height of 331 metres above** the river bed to connect Katra with Reasi in the Kashmir rail link project.
  - The rail bridge is to be **supported by 96 cables** made in Slovakia.
  - The project involves building the **world's highest railway bridge over the Chenab River.**
  - The bridge is being designed to facilitate train movement of up to **100 kmph speed.**
  - A large number of **sensors** have been placed on the Anji bridge so that the structural health can be monitored regularly.
  - An explosion with up to **40 kg explosives** will also not be able to destroy the bridge.



PIB

MAY 1

100TH EPISODE OF MANN KI BAAT

(Syllabus: GS Paper 2 - Polity & Governance)

English rendering of PM's address in the 100th Episode of 'Mann Ki Baat' on 30.04.2023

Context: Prime Minister monthly radio program **'Mann ki Baat'** reached a significant milestone on April 30th with the broadcast of its 100th episode.

- The program, which **started in October 2014,** has become an essential component of the Indian government's outreach program and has addressed various social groups, including women, youth, and farmers.

Mann Ki Baat

- **About**: Mann Ki Baat is an **Indian radio programme hosted by Prime Minister** in which he addresses the people of the nation on All India Radio, DD National and DD News.
- **Origin**: Since the **first show on 3 October 2014**, there have been 100 episodes.
  - The **first Mann Ki Baat programme was broadcast on the occasion of Vijayadashami on 3 October 2014** followed by the second broadcast on 2 November 2014.
  - From 2 June 2017, Mann Ki Baat is available in **regional dialects.**
  - The **50th episode of the program was broadcast on All India Radio** on 25 November 2018.
- **Objectives**: The main purpose of the program is to **"establish a dialogue with the citizens on issues of day-to-day governance",** according to a statement by the Information and Broadcasting Minister in the Rajya Sabha in July 2021.
  - The programme is India's **"first visually enriched radio program".**
- **Guests**: The **former President of the United States, Barack Obama,** was a part of the fourth episode of Mann Ki Baat, which was aired on 27 January 2015.
  - Obama had arrived in India to be a part of the Republic Day Parade.
  - On 29 September 2019, **Lata Mangeshkar** was a special guest on the show.
  - Guests such as **doctors and listeners** have been called on the show to interact with Modi.
- **Toll-free:** One can listen to 'Mann ki Baat' radio show **toll-free by dialing '1922'.** The Telecom Ministry has recently initiated this service.

INDIAN EXPRESS

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REVISED NUTRITIONAL STANDARDS

(Syllabus: GS Paper 2 - Health)

Govt revises nutritional standards in its food safety schemes for kids

SOURAV ROY BARMAN
NEW DELHI, APRIL 30

A DECADE after the National Food Security Act (NFSA) was enacted, the Centre has revised the nutritional standards of meals at schools and anganwadis, augmenting the proportion of calories and protein, while also mandating the inclusion of micronutrients in them.

The amendment has been done on the recommendations of an inter-ministerial committee, which, in its draft report, had also recommended that the serving of eggs as part of government food safety programmes be also made mandatory. However, that proposal has been shelved for now.

However, there are no restrictions on states and Union Territories to add eggs and other items on the menu of food safety programmes such as midday meals (now known as PM Poshan) at schools, or the Integrated Child Development Services (ICDS) scheme at anganwadis that covers pre-school children, along with pregnant and lactating mothers.

"Even if states are hesitant to add eggs, they will have to revise the menu and add more items including pulses and green leafy vegetables to meet the new standards. For now, eggs are part of the midday meal in 14 states and UTs ," said a government official.

In its draft report, the inter-ministerial team had recommended "urgent action", citing the possible impact of the Covid-19 pandemic in worsening the "silent crisis" of undernutrition.

The amended NFSA schedule II, which was notified on January 25, fixes nutritional standards for nine groups, starting from children aged six months to one year and those in upper primary classes (VI-VIII). Three new categories have been created for undernourished children aged between six months to six years.

The nutritional standards for some existing categories such as lower primary classes, and upper primary classes have been revised. For instance, under the previous norms, every child in lower primary classes was entitled to get 450 kilocalories (kcal) and 12 gm protein with midday meals.

Now, the protein quantity has been hiked to 15-20 gms, while fat (18-21 gms) and carbohydrates (70 gms) are part of the mix as well. Standards for micronutrients have also been fixed: calcium 170 mg, zinc 2 mg; iron 3.5 mg; dietary folate 50 micrograms, Vitamin A 100 micrograms; Vitamin B6 0.43 micrograms; Vitamin B12 0.66 micrograms.



Proportion of calories and protein has been hiked

Centre to push childhood care and education via Anganwadis

ESHA ROY
NEW DELHI, APRIL 30

THE CENTRE is planning to push Early Childhood Care and Education through 14 lakh anganwadi centres this year under the 'Poshan Bhi, Padhai Bhi' slogan as per the announcement made by Women and Child Development Minister Smriti Irani in September last year.

For this, anganwadi centres will be reimagined and recalibrated to focus not only on the nutritional aspect of children and mothers but also on early learning of children under 6 years, particularly those under 3 years.

The government now plans to reposition anganwadis as pre-schools as well. The WCD Ministry had set up a 22-member high level task force, chaired by former IAS officer Sanjay Kaul, to look into the matter. The task force submitted its report to the ministry in August last year, and a number of its recommendations are now being considered for implementation by the government. The government's plans for ECCE are in keeping with the National Education Policy 2020.

FULL REPORT ON
www.indianexpress.com

Context: A decade after the **National Food Security Act (NFSA)** was enacted, the Centre has revised the **nutritional standards of meals** at schools and anganwadis, augmenting the proportion of calories and protein, while also mandating the inclusion of micronutrients in them.

Key Points

- The amended NFSA schedule II **fixes nutritional standards for nine groups**, starting from children aged six months to one year and those in upper primary classes (VI-VIII).
- **Three new categories have been created** for undernourished children aged between six months to six years.
- The **nutritional standards for some existing categories** such as lower primary classes, and upper primary classes have been revised.
- For instance, under the previous norms, every child in lower primary classes was entitled to get 450 kilocalories (kcal) and 12 gm protein with midday meals.
- Now, the **protein quantity** has been hiked to 15-20 gms, while fat (18-21 gms) and carbohydrates (70 gms) are part of the mix as well.
- **Standards for micronutrients** have also been fixed: calcium 170 mg, zinc 2 mg; iron 3.5 mg; dietary folate 50 micrograms, Vitamin A 100 micrograms; Vitamin B6 0.43 micrograms; Vitamin B12 0.66 micrograms.
- There are **no restrictions on states and Union Territories to add eggs and other items** on the menu of food safety programmes such as midday meals (now known as PM Poshan) at schools, or the **Integrated Child Development Services (ICDS) scheme** at anganwadis that covers pre-school children, along with pregnant and lactating mothers.
- Even if states are hesitant to add eggs, they will have to **revise the menu and add more items including pulses and green leafy vegetables** to meet the new standards. For now, eggs are part of the midday meal in 14 states and UTs .

LIVE MINT

INDIA-GERMANY HOTLINE

(Syllabus: GS Paper 3 - International Relations)

India and Germany may set up hotline

Shashank Mattoo
shashank.mattoo@livemint.com

India and Germany are planning to establish a hotline to allow instant communication between senior officials and leaders, according to persons aware of the matter.

From countering security threats to coordinating on key diplomatic votes, this hotline will allow for closer coordination between the two countries. It is also a reflection of growing political trust between the two countries given that such hotlines are understood to exist with only a handful of key diplomatic partners.

India and Germany have intensified bilateral ties in recent years, with regular high-level political contact. Prime Minister Modi visited Germany for a meeting of the G7 grouping in 2022. During chancellor Olaf Scholz's visit to India in March this year both sides unveiled an expansive agenda on technology and economic ties with a focus on cutting edge tech relating to Artificial Intelligence, 5G and 6G. German foreign minister Annalena Baerbock has already visited India twice this year.

Context: India and Germany are planning to establish a hotline to allow instant communication between senior officials and leaders, according to persons aware of the matter.

Hotline

- **About**: A hotline is a **point-to-point communications link** in which a call is automatically directed to the preselected destination without any additional action by the user when the end instrument goes off-hook.
  - An example would be a phone that **automatically connects to emergency services** on picking up the receiver.
  - Therefore, dedicated hotline phones **do not need a rotary dial or keypad.**
  - A hotline **can also be called an automatic signaling,** ringdown, or off-hook service.
- **Hotline with other countries:**
  - **India-Pakistan:** On 20 June 2004, both **India and Pakistan agreed to extend a nuclear testing ban** and to set up an India-Pakistan hotline between their foreign secretaries aimed at preventing misunderstandings that might lead to nuclear war.
    - The hotline was set up with the assistance of United States military officers.
  - **China-India:** India and China announced a **hotline for the foreign ministers** of both countries while reiterating their commitment to strengthening ties and building "mutual political trust".
  - **India-United States:** In August 2015 the **hotline between the White House and New Delhi** became operational.
    - The decision of establishing this hotline was taken **during Obama's visit** to India in January 2015.
    - This is the first hotline connecting an Indian Prime Minister to a head of state.

INDIA-BANGLADESH REGIONAL CONNECTIVITY

(Syllabus: GS Paper 2 - International Relations)

PUSHING REGIONAL LINK

Bangladesh gives India Permanent Access to Ports

Cargoes can be transported from Bangladesh's Chattogram, Mongla ports to India's northeast, West Bengal

DipanjanRoy.Chaudhury@timesgroup.com

New Delhi: In a landmark decision, Bangladesh has given India access to Chattogram and Mongla ports for transit and trans-shipment of cargo vessels. The move will significantly cut time and cost needed to transport goods to India's northeastern states and West Bengal and push regional connectivity in Bay of Bengal.

The decision by the Sheikh Hasina government comes close on the heels of its announcement of an Indo-Pacific policy that will enable wider cooperation between New Delhi and Dhaka. Cargoes can be transported from Chattogram and Mongla ports to Agartala in Tripura via Akhaura, Dawki in Meghalaya via Tamabil, Sutarkandi in Assam via Sheola and Srimantapur in West Bengal via Bibir Bazar. The same routes can be used to transport commodities from the northeastern states to the two ports, officials from Dhaka told ET.

From Chattogram, Mongla Ports To

- Agartala in Tripura via Akhaura
- Dawki in Meghalaya via Tamabil
- Sutarkandi in Assam via Sheola
- Srimantapur in West Bengal via Bibir Bazar

Same routes can be used to transport commodities from India's northeastern states to the two ports

Access based on a 2018 pact that was delayed due to Covid-19

India, Bangladesh conducted trial run last year after the pandemic subsided

The access to ports can also strengthen the prospective India-Japan-Bangladesh trilateral in the backdrop of Japan's role in constructing Matarbari deep seaport.

The permanent access is based on a 2018 bilateral pact that was delayed due to the Covid-19 pandemic, officials from Dhaka said. India and Bangladesh had signed an 'Agreement on the Use of Chattogram and Mongla Ports for Movement of Goods to and from India' in October 2018 and finalised the standard operating procedures for operationalising the pact a year later.

The two countries tested the use of ports for trans-shipment of cargoes extensively over the past year after the pandemic had subsided. The first trans-shipment trial took place in July 2020 when a load of iron rods and pulses was transported from Haldia port near Kolkata to Chattogram port in southeast Bangladesh and then shipped across the land to Tripura.

Chattogram is Bangladesh's main port and handles more than 90% of the country's foreign trade. Mongla is the country's second largest seaport on the Bay of Bengal.

Context: In a landmark decision, **Bangladesh has given India access to Chattogram and Mongla ports** for transit and transshipment of cargo vessels.

- The move will significantly cut time and cost needed to transport goods to India's northeastern states and West Bengal and push regional connectivity in Bay of Bengal.

Other efforts were taken

- **Multi-modal approach**: A multi-modal connectivity approach has been felt for a long time because reopening the pre-Partition trade routes would reduce the cost and time o**f transportation for the Northeast and generates revenue for Bangladesh.**
- **MoUs**: In 2010, India and Bangladesh signed a Memorandum of Understanding (MoU) to allow for the **use of Chittagong and Mongla Ports i**n Bangladesh for the movement of goods to and from India.
- **Bridge connection**: In 2021, the **Maitri Setu built over the Feni River** was inaugurated that would reduce the distance between Tripura and Chittagong port to just 111 km.
  - Mizoram is keen on bridges across the **Khawthlangtuipui river (Karnaphuli in Bangladesh)** for faster access to the Chittagong port.
- **Multi-modal transit hub**: The government is working on a multi-modal transit hub at Sabroom that can help goods reach the Chittagong port in a few hours.
- **Road connectivity:** Road connectivity in **Meghalaya Dawki, southern Assam's Sutarkandi and Tripura's Akhaura** linking eastern and south-eastern Bangladesh is also being improved.
- **Transit of inland vessels**: Under **Indo-Bangladesh Protocol** on Inland Water Transit & Trade involving the Brahmaputra, inland vessels of one country can transit through the specified routes of the other country.
  - The cargo ships from Bangladesh have reached Tripura through the Gomati River and Assam's Karimganj via the Kushiara River.
- **BBIN**: The **Bangladesh, Bhutan, India, and Nepal Motor Vehicle Agreement (BBIN-MVA)** is another key development that can enhance the trade potential of Bangladesh with India and Nepal and further to Bhutan once Bhutan formally joins the MVA.



LIVE MINT

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PACIFIC ISLAND FORUM

(Syllabus: GS Paper 2 - International Organisations)

Modi, Biden to meet Pacific Islands' heads

US president Joe Biden and Prime Minister Narendra Modi will join Pacific Islands leaders next month for a "historic" future-oriented meeting, Papua New Guinea prime minister James Marape said on Sunday.

"This is a historic first and at the same time a 'going forward' futuristic meeting of global superpowers, in the biggest country in the Pacific," Marape said in a statement.

Biden's 22 May stopover in the capital Port Moresby would be the first visit by a sitting US president to the resource-rich but largely undeveloped country of 9.4 million people just north of Australia.

Papua New Guinea is being courted by China and by the US and its allies, as Marape seeks to boost foreign investment. Chinese President Xi Jinping visited the nation in 2018.

Washington has stepped up efforts to counter Beijing's growing influence in the region after China struck a security pact with the Solomon Islands last year. China failed to reach a wider security and trade deal with 10 Pacific island countries.

China and Australia have been major aid and infrastructure donors. PTI

Context: U.S. President and his Indian counterpart will join **Pacific Islands leaders** next month for a "historic" future-oriented meeting.

- **Papua New Guinea** is being courted by China and by the U.S. and its allies, as Papua New Guinea seeks to boost foreign investment.

Pacific Island Forum (PIF)

- **About**: The Pacific Islands Forum is the **region's premier political and economic policy** organisation.
  - Founded in **1971**.
- **Objectives**: The Forum's Pacific Vision is for a **region of peace, harmony, security, social inclusion and prosperity,** so that all Pacific people can lead free, healthy, and productive lives.
- **Functions**: The Pacific Islands Forum **works to achieve this by fostering cooperation** between governments, collaboration with international agencies, and by representing the interests of its members.
  - The work of the Forum is guided by the **Framework for Pacific Regionalism**, which was endorsed by Forum Leaders in 2014.
  - It sets out the **strategic vision, values, objectives and approaches** to achieve deeper regionalism in the Pacific.
- **Members**: It **comprises 18 members:** Australia, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.
- **Dialogue partners**: The Forum currently **recognises 18 dialogue partners:** Canada, People's Republic of China, Cuba, European Union, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Malaysia, Philippines, Spain, Thailand, Turkey, United Kingdom and the United States.

DTE

MAY 1

REVENUE VILLAGES

(Syllabus: GS Paper 3 - Env & Eco)

38 forest and unsurveyed villages in Odisha's Ganjam granted revenue status

The residents of the villages have also been granted community forest rights & can also avail government benefits now

By Rajat Ghai
Published: Saturday 29 April 2023



Rights for the dwellers

What the Forest Rights Act, 2006, entails

- Tenurial security over the forestland under occupation prior to December 13, 2005
- Recognition of community right over forest and forest products
- Protection and conservation of community forest resources
- Conversion of all forest villages and habitation located inside the forestland into revenue villages
- In situ rehabilitation of displaced persons evicted without compensation prior to December 13, 2005
- Recognition of ancestral domain (habitat) right to



Residents of Gunduribadi village in Odisha's Nayagarh district get ready for mapping their land boundaries for the Forest Rights Act implementation. ▪ SPECIAL ARRANGEMENT

Particularly Vulnerable Tribal Groups

- Seasonal access to nomadic, pastoral and semi-nomadic communities over forestland

- Conversion of all leases granted by erstwhile governments, zamindars and king into permanent land records

Context: Thirty-eight unsurveyed and forest **villages in Odisha's coastal Ganjam district have been converted into revenue villages,** according to a notification issued by the district magistrate on April 13, 2023.

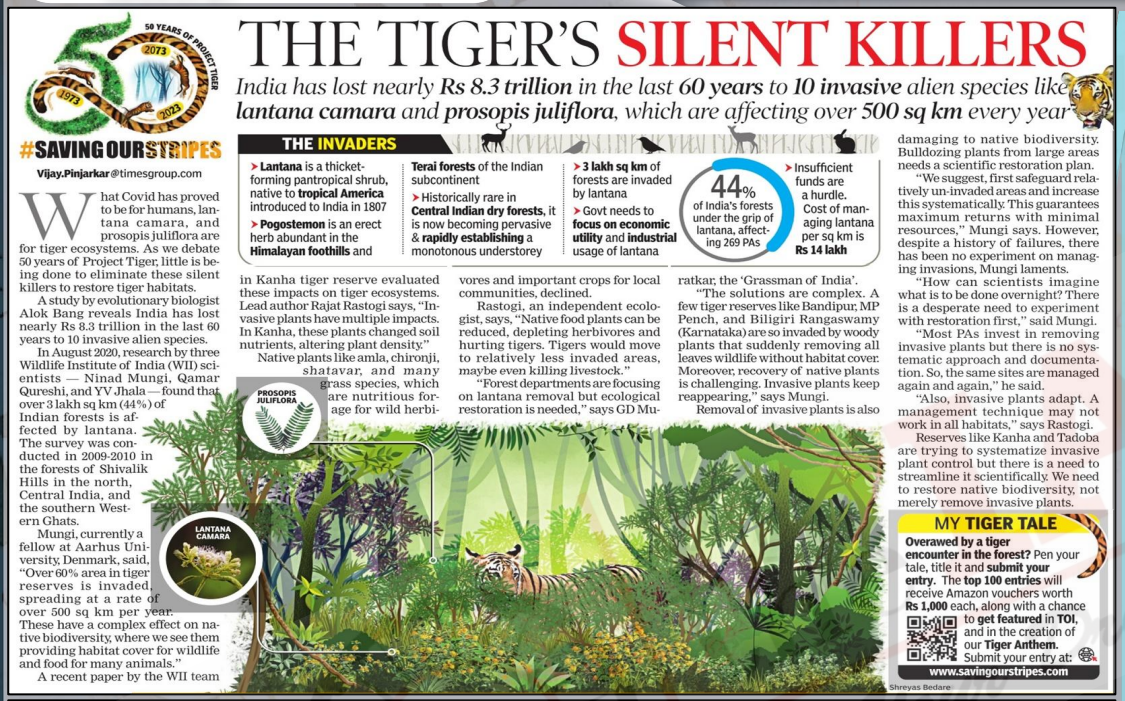
- They are now revenue villages under Section 2 (14) of the Orissa Survey and Settlement Act, 1958 and in pursuance of **Section 3(1)(h) of the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 or FRA.**
- The 38 villages have received their new status after over half a decade, with the process to do so having put in motion in 2017.

Key Points

- India's forests were divided into **three categories as per the 1878 amendment of the Forest Act** authorised in 1865 under colonial British rule: R**eserved, protected and village forests.**
- Under the new provisions, some villagers were **permitted to reside in reserved forests,** provided that they provided free labour for the forest department to cut and transport trees and protect forests from fires.
    - Such forests came to be known as '**forest villages.'**
- The erstwhile government in 2013 recognised the settlement and conversion of all forest villages, old habitations, unsurveyed villages, etc into revenue villages as one of the rights of forest dwelling **Scheduled Tribes and other traditional forest dwellers under Section 3(1)(h) of the FRA, 2006.**
    - A **revenue village is a small administrative region**, having defined borders.
    - One revenue village may **comprise of many hamlets.**
    - It is a geographic area comprising many Tehsils, which in turn cover villages.
    - The **Revenue Divisional Officer** exercises some fiscal and administrative powers over its jurisdiction.
    - It is headed by a **Revenue Divisional Officer.**
- The notion of a revenue village dates all the way back to **Raja Todar Mal**, the minister of revenue in Emperor Akbar's court, who instituted a land reform system.
    - The crux of the reform was the calculation of land revenue based on the quantity of cultivation, the soil type, as well as the quality of the harvests.
    - The **Marathas excelled in the compilation of geographical maps of revenue villages** for the benefit of native rulers in the 18th century.

INVASIVE ALIEN SPECIES

(Syllabus: GS Paper 3 - Env & Eco)



THE TIGER'S SILENT KILLERS

*India has lost nearly **Rs 8.3 trillion** in the last **60 years** to **10 invasive** alien species like **lantana camara** and **prosopis juliflora**, which are affecting over **500 sq km** every year*

#SAVINGOURSTRIPES

Vijay.Pinjarkar@timesgroup.com

What Covid has proved to be for humans, lantana camara, and prosopis juliflora are for tiger ecosystems. As we debate 50 years of Project Tiger, little is being done to eliminate these silent killers to restore tiger habitats.

A study by evolutionary biologist Alok Bang reveals India has lost nearly Rs 8.3 trillion in the last 60 years to 10 invasive alien species.

In August 2020, research by three Wildlife Institute of India (WII) scientists — Ninad Mungi, Qamar Qureshi, and YV Jhala — found that over 3 lakh sq km (44%) of Indian forests is affected by lantana. The survey was conducted in 2009-2010 in the forests of Shivalik Hills in the north, Central India, and the southern Western Ghats.

Mungi, currently a fellow at Aarhus University, Denmark, said, "Over 60% area in tiger reserves is invaded, spreading at a rate of over 500 sq km per year. These have a complex effect on native biodiversity, where we see them providing habitat cover for wildlife and food for many animals."

A recent paper by the WII team in Kanha tiger reserve evaluated these impacts on tiger ecosystems. Lead author Rajat Rastogi says, "Invasive plants have multiple impacts. In Kanha, these plants changed soil nutrients, altering plant density."

Native plants like amla, chironji, shatavar, and many grass species, which are nutritious forage for wild herbivores and important crops for local communities, declined.

Rastogi, an independent ecologist, says, "Native food plants can be reduced, depleting herbivores and hurting tigers. Tigers would move to relatively less invaded areas, maybe even killing livestock."

"Forest departments are focusing on lantana removal but ecological restoration is needed," says GD Muratkar, the 'Grassman of India'.

"The solutions are complex. A few tiger reserves like Bandipur, MP Pench, and Biligiri Rangaswamy (Karnataka) are so invaded by woody plants that suddenly removing all leaves wildlife without habitat cover. Moreover, recovery of native plants is challenging. Invasive plants keep reappearing," says Mungi.

Removal of invasive plants is also damaging to native biodiversity. Bulldozing plants from large areas needs a scientific restoration plan.

"We suggest, first safeguard relatively un-invaded areas and increase this systematically. This guarantees maximum returns with minimal resources," Mungi says. However, despite a history of failures, there has been no experiment on managing invasions, Mungi laments.

"How can scientists imagine what is to be done overnight? There is a desperate need to experiment with restoration first," said Mungi.

"Most PAs invest in removing invasive plants but there is no systematic approach and documentation. So, the same sites are managed again and again," he said.

"Also, invasive plants adapt. A management technique may not work in all habitats," says Rastogi.

Reserves like Kanha and Tadoba are trying to systematize invasive plant control but there is a need to streamline it scientifically. We need to restore native biodiversity, not merely remove invasive plants.

THE INVADERS

- **Lantana** is a thicket-forming pantropical shrub, native to **tropical America** introduced to India in 1807
- **Pogostemon** is an erect herb abundant in the **Himalayan foothills** and **Terai forests** of the Indian subcontinent
- Historically rare in **Central Indian dry forests**, it is now becoming pervasive & **rapidly establishing** a monotonous understorey
- **3 lakh sq km** of forests are invaded by lantana
- Govt needs to **focus on economic utility** and **industrial** usage of lantana

44% of India's forests under the grip of lantana, affecting 269 PAs

- Insufficient funds are a hurdle. Cost of managing lantana per sq km is **Rs 14 lakh**

PROSOPIS JULIFLORA

LANTANA CAMARA

MY TIGER TALE

Overawed by a tiger encounter in the forest? Pen your tale, title it and **submit your entry.** The **top 100 entries** will receive Amazon vouchers worth **Rs 1,000** each, along with a chance to **get featured** in **TOI,** and in the creation of our **Tiger Anthem.** Submit your entry at: www.savingourstripes.com

Shreyas Bedare

WHY LANTANA CAMARA IS A PROBLEM

- **Most aggressive invasive alien species, it covers almost a third of Delhi's Ridge**
- Has invaded tropic and sub-tropical regions of all five continents
- Introduced in India by Portuguese and others as an ornamental plant

Workers uproot lantana and put it upside down at Asola

Native to Central and South America | **Spread** by birds

WHY IT'S DANGEROUS

- Alters the forest eco-system
- Results in failure of regeneration of forests
- Has invaded several million hectares of forests in India
- Rate of growth is 1.5 inches per day
- Produces volatile chemical that bars insects from coming near it, except its native insect

FINAL SOLUTION

CUT ROOTSTOCK METHOD

- Cut portion between stem and root using shovel
- Lift and put the plant upside down
- This creates a hormonal imbalance, so no new root is produced and lantana dries up
- Clean the area of any germinating lantana
- Plant native shrubs or creepers

Context: What Covid has proved to be for humans, **lantana camara, and prosopis juliflora** are for tiger ecosystems.

- A study reveals India has lost nearly Rs 8. 3 trillion in the last 60 years to 10 **invasive alien species.**
- In August 2020, research by three Wildlife Institute of India (WII) found that over 3 lakh sq km (44%) of **Indian forests is affected by lantana.**

Lantana camara

- Lantana camara (common lantana) is a species of **flowering plant** within the verbena family (Verbenaceae), **native to the American tropics.**
- Lantanas **arrived in India as a decorative shrub during British colonial period** but quickly took over several ecosystems as an invasive plant.

Prosopis Juliflora

- Prosopis Juliflora is a **shrub or small tree** in the family Fabaceae.
- It is native to **Mexico, South America and the Caribbean**.
- It was initially in**troduced in India during colonial times.** Since then it has become invasive species.

DTE

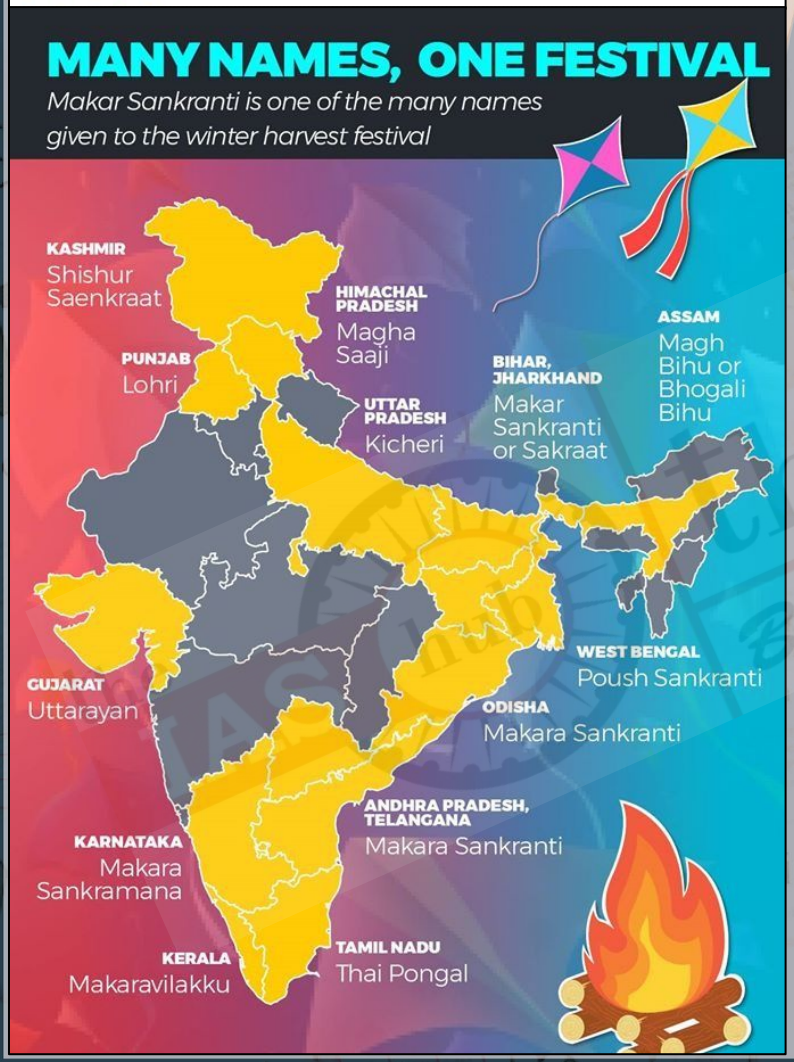
MAY 1

BIHAN MELA

(Syllabus: GS Paper 1 - Art & Culture)

Bihan Mela: A seed festival aims to help tribal Kondh farmers in Odisha return to their agricultural traditions

The seed festival and bank will facilitate use of indigenous varieties and traditional farming which farmers have abandoned since the Green Revolution



Context: Since 2019, members of the **Kondh tribe in Odisha**'s Nayagarh district have added one more event, Bihan Mela, to their calendar of festivals and celebrations.

- Called **Bihan Mela,** literally the seed festival, the event is participated by farmers from as many as 40 villages in Dasapalla block, surrounded by hills and forests.

Bihan Mela

- Preparations begin as soon as farmers have harvested kharif crops, which includes both **hybrid and indigenous varieties of paddy, millets, maize and sorghum**.
- **Women**, who are at the helm of this festival, carefully collect seeds of the indigenous varieties and store them in earthen pots.
- Then, on a designated day in December, they **decorate the pots with red and white motifs,** place them in a bamboo basket and carry it on head to the village where the fair is being organised.
- Along the way, they are **accompanied by men beating drums** and other traditional instruments.

Kondh tribe

- Khonds (also spelt Kondha and Kandha) are an **indigenous Adivasi tribal** community in India.
- Traditionally **hunter-gatherers**, they are divided into the hill-dwelling Khonds, and plain-dwelling Khonds for census purposes, but the Khonds themselves identify by their specific clans.
- Khonds speak the Kui language and write it in the **Odia script.**
- The Khonds are the largest tribal group in the **state of Odisha.**
- They are known for their **rich cultural heritage,** valourous martial traditions, and indigenous values which center on harmony with nature.
- The **Kandhamal district in Odisha** has a fifty-five percent Khond population, and is named after the tribe.
- They are a **designated Scheduled Tribe** in the states of Andhra Pradesh, Bihar, Chhattisgarh, Madhya Pradesh, Maharashtra, Odisha, Jharkhand and West Bengal.
- Niyamgiri hills in Odisha are inhabited by the **Dongria Khond**, a **Particularly Vulnerable Tribal Group.**

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