

AUGUST

12

CRUX 10

10 News. 10 Sources. One Place



The Indian **EXPRESS** live **mint** पॉइंट

DownToEarth
FORTNIGHTLY ON POLITICS OF DEVELOPMENT,
ENVIRONMENT AND HEALTH

**Science
Reporter**



MK Yadav Sir

Table of Contents

- 1 Apprenticeship Scheme
- 2 PLI Scheme
- 3 Industrial Corridor Projects
- 4 Delimitation Commission
- 5 Revamp of Criminal Laws
- 6 Tampara Lake
- 7 Elephants in India
- 8 Mughal Garden
- 9 Kosi River
- 10 Placenta-on-a-Chip

Skill ministry launches DBT in apprenticeship scheme

To bolster the participation of both industries and youngsters individuals in apprenticeship training nationwide, Union Minister for Education and Skill Development & Entrepreneurship Dharmendra Pradhan launched direct benefit transfer (DBT) in National Apprenticeship Promotion Scheme (NAPS) on Friday. About 2.5 million youths have been engaged as apprentices since the inception of inception of the scheme.

BS REPORTER

Ministry of Education
Government of India

75
Azadi Ka
Amrit Mahotsav

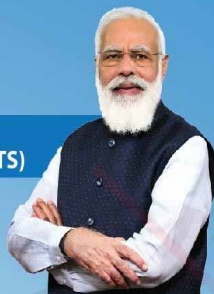
Cabinet Decisions

24th November, 2021

Cabinet Approves

**Rs. 3,054 Crore stipendiary support under
National Apprenticeship Training Scheme (NATS)**

From 2021-22 to 2025-26 (up to 31-03-2026)
in line with NEP 2020



Key Highlights



The increased expenditure is about 4.5 times of expenditure made during the previous 5 years.



9 Lakhs (approx.) apprentices will be trained by industry & commercial organizations.



Employment to 7 lakhs (approx.) youths in the next five years.



Besides the Engineering stream, students from Humanities, Science & Commerce also to be included.

Context: To bolster the participation of both industries and young individuals in apprenticeship training on a nationwide scale,, Union Minister for Education and Skill Development & Entrepreneurship launched Direct Benefit Transfer (DBT) in **National Apprenticeship Promotion Scheme (NAPS)**.

- An amount of approx **Rs 15 crores** was **disbursed** to one lakh apprentices by the Minister today marking the launch of DBT in NAPS.

National Apprenticeship Promotion Scheme

- **About:** NAPS was **launched in August 2016** by Government of India to promote the Apprenticeship in the country by providing financial incentives, technology and advocacy support.
- **Nodal Ministry:** Ministry of Skill Development and Entrepreneurship.
- **Components:** The scheme has the following **two components**:
 - **Sharing of 25%** of prescribed stipend subject to a maximum of Rs. 1500/- per month per apprentice with the employers.
 - **Sharing of basic training cost** up to a maximum of Rs. 7,500 per apprentice.
- **Implementing Agencies:** The **Regional Directorates of Skill Development and Entrepreneurship (RDESE)** under Directorate General of Training (DGT) are the implementing agencies in their regions in respect of all "Designated Trades" under the Act for all establishments falling under the Central Government jurisdiction.
 - **National Skill Development Corporation (NSDC)** and CEOs of the Sector Skill Councils are the implementing agencies in their sectors in respect of "Optional Trades" for the establishment under the Central Government jurisdiction.
- **Key Features:**
 - Wider option for the apprentices-integration with other schemes
 - Ease of Administering through technology
 - Involvement of States/UTs
 - Promoter and Facilitators/Third Party Aggregators (TPA)

PLI disbursement to hit ₹13,000 cr this year: Official

ENS ECONOMIC BUREAU
NEW DELHI, AUGUST 11

EVEN AS the Union government looks to tweak the production linked-incentive (PLI) schemes for some sectors, it is expecting disbursements to likely increase to ₹13,000 crore to eligible firms.

Rajesh Kumar Singh, Secretary of the Department for Promotion of Industry and Internal Trade (DPIIT), Friday said disbursements for PLI schemes will be higher this year along with some "course correction" for certain sectors which are lagging behind in the scheme. "I think it (disbursements) will go up to about ₹13,000 crore this year", he said.

The government had disbursed ₹2,900 crore till March 2023 out of claims worth ₹3,400 crore received so far. The scheme was announced in 2021 for 14 sectors, including telecom, white goods, textiles, medical device manufacturing, automobiles, speciality steel, food products, solar PV modules and advanced chemistry cell batteries, with an outlay of ₹1.97 lakh crore.

Asked about the timing for full fund disbursements, Singh said: "It is difficult to say as so many factors come into play. But we expect that during the tenure of the scheme, a good part (of that) will get exhausted." The secretary said the restructured schemes for PLI are under various stages of inter-ministerial consultation. "There are some course-corrections or tweaking that are required. Some are mi-

GOVT EYES TIGHTER QUALITY CONTROL FOR IMPORTS

New Delhi: The government will issue 60 quality control orders (QCOs) this year for products such as consumer goods, rubber, paper and light engineering items with an aim to contain imports of sub-standard goods and boost domestic manufacturing, a senior government official said Friday. Secretary in Department for Promotion of Industry and Internal Trade (DPIIT) Rajesh Kumar Singh said that 33 QCOs for over 127 products such as ACs, refrigerators, pipes, and safety valves have been issued so far. PTI

nor, some are major and that will require higher level approvals."

PLI schemes for sectors which are not picking up well include high-efficiency solar PV modules, advanced chemistry cell batteries, textile products and speciality steel. The scheme has performed better for sectors such as electronics, pharma, medical devices, telecom, food processing, and white goods, he said.

The government is trying to sort out issues such as timely processing of claims, visa-related matters where vendors require Chinese professionals' expertise, and delay in getting environmental clearances that have been raised by the stakeholders of PLI schemes.

PLI SCHEME

(Syllabus: GS Paper 3 - Economy)

Context: Even as the Union government looks to tweak the **production linked-incentive (PLI) schemes** for some sectors, it is expecting disbursements to likely increase to Rs 13,000 crore to eligible firms.

- The government had **disbursed Rs 2,900 crore** till March 2023 out of claims worth Rs 3,400 crore received so far.
- The **scheme was announced in 2021** for 14 sectors, including telecom, white goods, textiles, medical device manufacturing, automobiles, speciality steel, food products, solar PV modules and advanced chemistry cell batteries, with an outlay of Rs 1.97 lakh crore.

Production-linked incentive (PLI) scheme

- **About:** The PLI scheme was conceived to scale up **domestic manufacturing capability**, accompanied by higher import substitution and employment generation.
- **Allocation in Budget:** The government has **set aside Rs 1.97 lakh crore** under the PLI schemes for various sectors and an additional allocation of Rs 19,500 crore was made towards PLI for solar PV modules in Budget 2022-23.
- **Launch:** Launched in March 2020, the scheme **initially targeted three industries:**
 - Mobile and allied Component Manufacturing
 - Electrical Component Manufacturing and
 - Medical Devices
- **Incentives Under the Scheme:** **calculated on the basis of incremental sales**, range from as low as 1% for the electronics and technology products to as high as 20% for the manufacturing of critical key starting drugs and certain drug intermediaries.
 - In some sectors such as advanced chemistry cell batteries, textile products and the drone industry, **the incentive to be given will be calculated on the basis of sales, performance and local value addition done over the period of five years.**
- **Sectors for the which PLI Scheme has been Announced:** So far, the government has announced PLI schemes for **14 sectors** including automobile and auto components, electronics and IT hardware, telecom, pharmaceuticals, solar modules, metals and mining, textiles and apparel, white goods, drones, and advanced chemistry cell batteries.

Government of India developing 11 Industrial Corridor Projects across the country in phased manner

Context: Government of India is developing eleven (11) **Industrial Corridor Projects** as part of the National Industrial Corridor Programme across the country in a phased manner, information has been provided by the Union Minister of State for Commerce and Industry in the Rajya Sabha.

- As per the approved institutional and financial structure for the industrial corridors, the Government of India, through **National Industrial Corridor Development & Implementation Trust (NICDIT)**, provides funds as equity/debt for the development of world-class trunk infrastructure in the industrial nodes/regions under industrial corridors and the States are responsible for making available contiguous and encumbrance free land parcels.
- Out of the allocated funds up to 31.07.2023, DPIIT has sanctioned and released **funds amounting to Rs. 9,899.89 crore** for the Industrial Corridor Project, which has been utilized to the extent of Rs. 9,816.98 crore.

The corridors-wise status/proposed developmental activities of approved projects/ Nodes:

Sl. No.	Corridor	Name of the Project		Status/Proposed activity
1	DMIC: Delhi Mumbai Industrial Corridor	(i)	Vikram Udyogpuri Township in Ujjain, Madhya Pradesh	Implementation of major trunk infrastructure packages completed. Land allotment to industries started.
		(ii)	Integrated Industrial Township at Greater Noida, Uttar Pradesh	
		(iii)	Multi Modal Logistic Hub (MMLH) and Multi Modal Transport Hub (MMTH) at Greater Noida (U.P.)	Approved by GoI for development under PPP mode. Taken up for development/implementation.
		(iv)	Dholera Special Investment Region (DSIR) in Gujarat	Implementation of major trunk infrastructure packages completed. Land allotment to industries started.
		(v)	Shendra Bidkin Industrial Area (SBIA) in Maharashtra	
		(vi)	Integrated Multi Modal Logistics Hub at Nangal Chaudhary in Haryana	Approved by GoI for development under PPP mode. Taken up for development/ implementation.
2	CBIC: Chennai Bengaluru Industrial Corridor	(i)	Industrial Node at Krishnapatnam in Andhra Pradesh	Special purpose vehicle (SPV) of the project incorporated and appointment of Contractor for Engineering, Procurement and Construction (EPC) is taken forward by the SPV.
		(ii)	Industrial Node at Tumakuru in Karnataka	SPV of the project incorporated. EPC Contractor appointed for development of trunk infrastructure works.

EC Publishes Final Delimitation Report on Assam, Renames One LS and 19 Assembly Seats

Bikash.Singh@timesgroup.com

Guwahati: The Election Commission of India (EC) on Friday published the final delimitation order for Assembly and Parliamentary constituencies in Assam, retaining the number of seats at 126 and 14, respectively.

The commission stated over 1,200 representations were considered before finalising the proposal and 45% of suggestions and objections have been addressed in the report.

EC revised the names of 19 Assembly constituencies and one Parliamentary seat.

All constituencies have been delimited based on the 2001 Census as provided in Article 170 and Article 82 of the Constitution. 19 assembly and two Lok Sabha constituencies have been reserved for Scheduled Tribes (STs). One Lok Sabha and nine assembly constituencies have been reserved for Scheduled Castes (SCs). SC seats have increased to 9, from 8 while ST seats have risen to 19, from 16.

There is an increase of one assembly seat in autonomous districts in West Karbi Anglong district while constituencies in Bodoland districts have increased to 15, from 11. A new Parliamentary seat was named 'Ka-



MORE SC AND ST SEATS



SC assembly seats have increased to nine, from 8 and ST assembly seats have gone up to 19, from 16

15 SEATS IN BODOLAND



The number of assembly constituencies in Bodoland districts has risen to 15, from 11

ziranga' while one Assembly seat was named 'Manas'.

One parliamentary and some assembly constituencies have been given "paired names" such as Darang-Udaigiri, Hajo-Sualkuchi, Bokochaygaon, Nagaon-Batadraba, Bhowanipur-Sorbhog, Algapur-Katlichera, in view of the demand from members of the public, the poll panel said.

Earlier, 10 political parties from Assam filed a writ petition challenging the delimitation exercise in the Supreme Court. The Election Commission of India held public hearings on the draft delimitation proposal for Assam from July 19 to 21.

A regional party, Assam Jatiya Parishad (AJP), has filed a writ petition in the Supreme Court seeking stay on the delimitation process. All India United Democratic Front (AIUDF) had also filed a case in the SC against the draft delimitation proposal.

In June, EC published a draft delimitation proposal.

The last delimitation exercise in Assam was carried out in 1976.

Under the provisions of Delimitation Act, 1972, the last delimitation of constituencies in the State of Assam was done on the basis of census figures, 1971, by the then Delimitation Commission in 1976.

Context: The Election Commission published its final report on the **delimitation of assembly and parliamentary constituencies in Assam**, keeping their total numbers unchanged at 126 and 14 respectively.

- In its final order, the poll panel has revised the nomenclature of one parliamentary and 19 assembly constituencies.

Delimitation Commission

- **About:** The Delimitation Commission is a high-level body set up by an **act of the Parliament**.
 - Delimitation is the **process of fixing limits or boundaries of territorial constituencies** in a country to represent changes in population.
- **Constitutional Provisions:** The delimitation commission is an independent body **constituted under Article 82** after the Parliament enacted a Delimitation Act after every census.
 - Under **Article 170**, States also get divided into territorial constituencies as per Delimitation Act after every Census.
- **Appointment:** The Delimitation Commission is **appointed by the President of India** and works in collaboration with the Election Commission of India.
- **Composition:**
 - A retired judge of the Supreme Court
 - The Chief Election Commissioner
 - State Election Commissioners (of the respective states)
- **Decision:** If the members of the Commission have differing opinions, then the **decision of the majority will be taken into consideration**.
- **Duties:** It shall be the duty of the Commission to readjust the representation of the several territorial constituencies in the House of the People and of the several territorial constituencies in the Legislative Assembly of each state on the basis of the latest census figures of population.

Key Facts

- The **first delimitation exercise** was carried out by the President (with the help of the Election Commission) in 1950-51.
- The **Delimitation Commission Act** was enacted in 1952.
- Delimitation Commissions had been **set up four times** - 1952, 1963, 1973 and 2002 under the Acts of 1952, 1962, 1972 and 2002.
- There was **no delimitation after the 1981 and 1991 Censuses**.

Union Home Minister and Minister of Cooperation, Shri Amit Shah introduces the Bhartiya Nyaya Sanhita Bill 2023, the Bharatiya Nagarik Suraksha Sanhita Bill, 2023 and the Bharatiya Sakshya Bill, 2023 in the Lok Sabha, today

Context: Union Home Minister and Minister of Cooperation introduced the **Bharatiya Nyaya Sanhita Bill, 2023, Bharatiya Nagarik Suraksha Sanhita Bill, 2023 and Bharatiya Sakshya Bill, 2023** in the Lok Sabha.

- Indian Penal Code, 1860 will be replaced by **Bharatiya Nyaya Sanhita Bill, 2023**, the Criminal Procedure Code, 1898 will be replaced by the **Bhartiya Nagarik Suraksha Sanhita Bill, 2023** and the Indian Evidence Act, 1872 will be replaced by the **Bharatiya Sakshya Bill, 2023**.

THREE BILLS, KEY PROVISIONS

BHARATIYA NAGARIK SURAKSHA SANHITA

533 SECTIONS (INSTEAD OF 478 IN CrPC)

160 SECTIONS AMENDED

9 NEW SECTIONS

9 SECTIONS REPEALED

BHARATIYA NYAYA SANHITA

356 SECTIONS (INSTEAD OF 511 IN IPC)

175 SECTIONS AMENDED

8 NEW SECTIONS

22 SECTIONS REPEALED

BHARTIYA SAKSHYA ADHINIYAM

170 SECTIONS (INSTEAD OF 167 IN EVIDENCE ACT)

23 SECTIONS AMENDED

1 NEW SECTION

5 SECTIONS REPEALED



TECHNOLOGY PUSH NEW 'DOCUMENTS' IN PROPOSED EVIDENCE LAW

Electronic and digital record; Email, server logs, documents on computer; Phone or laptop messages; Website, locational evidence; Mail messages on digital devices



CITIZENS' CONVENIENCE

Zero FIRs; Provisions for e-FIR; Designated officer in every district and police station to give notice of arrest; Police to inform victim of progress of investigation within 90 days; In sexual violence cases, statement of victim to be recorded by woman magistrate



USE OF FORENSICS

Mandatory use of forensics in all states/ Union Territories; Mandatory use of forensic experts in all offences punishable with 7 years or more; Necessary infrastructure in states/UTs to be created within 5 years

TERRORISM AND ORGANISED CRIME

Terrorism defined for the first time in Bharatiya Nyaya Sanhita; New section relating to organised crime

CRIME AGAINST WOMEN

New offence for sexual relationships on false promise of marriage, employment, fake disclosure of identity, etc.; 20

years or life imprisonment for gangrape; where victim is minor provision for life imprisonment or death penalty

SUMMARY TRIAL

Petty cases expedited by summary trial; Summary trial mandatory for less serious cases like theft, receiving stolen property, trespass, breach of the peace, criminal

intimidation, etc.; Where punishment is up to 3 years, Magistrate may conduct summary trial.

COMMUNITY SERVICE AS PUNISHMENT

Public servant unlawfully engaging in trade; Non appearance; Attempt to commit suicide; Theft of less than ₹5,000; Misconduct in public by a drunken person; Defamation

NGT to Odisha: stop illegal construction near Tampara Lake

Satyasundar Barik
BHUBANESWAR

The National Green Tribunal, Eastern Zone, has directed the Odisha government not to go ahead with 'illegal' construction in and around Tampara Lake, a designated Ramsar site and one of the largest picturesque freshwater lakes of the State.

The green tribunal has issued the order after hearing a petition filed by Wildlife Society of Orissa, an

environmental pressure group, which alleged that the ongoing large-scale permanent construction work in Tampara Lake was illegal.

It said the construction within the waterbody and its zone of influence were taken up without obtaining requisite permissions. The WSO had brought to its notice about non-implementation of wetland rules and dysfunctional status of grievance committee and State wetland authority.

Context: The National Green Tribunal, Eastern Zone, has directed the Odisha government not to go ahead with 'illegal' construction in and around Tampara Lake, a designated Ramsar site and one of the largest picturesque freshwater lakes of the State.

- The NGT has issued the order after hearing a petition filed by Wildlife Society of Orissa, an environmental pressure group, which alleged that the ongoing large-scale permanent construction work in Tampara Lake was illegal.

Key Points

- Tampara Lake supports at least 60 species of birds, 46 species of fishes, at least 48 species of phytoplanktons, and more than seven species of terrestrial plants and macrophytes.
- There is a patch of forest with width of 2 km that separates Bay of Bengal from the lake.
- The wetland is an important habitat for vulnerable species such as *Cyprinus carpio*, common pochard (*Aythya ferina*), and river tern (*Sterna aurantia*).
- Tampara is already placed in the **Wetland Atlas** prepared by Ministry of Environment, Forest and Climate Change in 2010.
- All Ramsar sites are protected under **Wetland Conservation Rules 2017**.

Ramsar sites in India



ELEPHANTS IN INDIA

(Syllabus: GS Paper 3 - Env & Eco)

Kerala, Tamil Nadu & Karnataka record 13,662 jumbos; male-female ratios and age gradation healthy, say experts

Climate change, human-elephant conflict and habitat fragmentation affecting movement of the animals

By Himanshu Nitnaware
Published: Friday 11 August 2023

Est mean Jumbo count

Division	Numbers
Bandipur Tiger Reserve	1,116
Nagarhole Tiger Reserve	831
BRT Tiger Reserve	619
MM Hills Wildlife Sanctuary	706
Bhadra Tiger Reserve	445
Bannerghatta National Park	127
Shivamogga Wildlife	127
Madikeri Wildlife Division	113
Cauvery Wildlife Sanctuary	236
Madikeri Territorial Division	214

Context: The number of elephants in Karnataka and Tamil Nadu have seen a slight increase, but have almost halved for Kerala, according to the recently released **Elephant Population Estimates** jointly conducted by the southern India states.

- **Karnataka's elephants increased** from 6,049 in 2017 to 6,395 in 2023.
- In **Tamil Nadu**, there was a rise to 2,961 in 2023 from 2,761 in 2017.
- In **Kerala**, the population has **dropped** from 9,026 to 4,306 in the same period.

Status of Elephants in India

- India has **about 27,000 Asian Elephants**, which is the world's largest population of the species.
- As per Elephant Census (2017), **Karnataka has the highest number of elephants** (6,049), followed by Assam (5,719) and Kerala (3,054)
- More than **60% of the world's elephant population** is in India.
- The elephant is the **Natural Heritage Animal of India**.
- **India has the largest number of wild Asian Elephants**, estimated at 29,964 according to 2017 census by Project Elephant, i.e., about 60% of the species' global population.
- **Conservation Status:**
 - **International Union for Conservation of Nature (IUCN) Red List of threatened species:**
 - African Forest Elephant- Critically Endangered
 - African Savanna Elephant- Endangered
 - Asian Elephant- Endangered
 - **Convention of the Migratory species (CMS):** Appendix I
 - **Wildlife (Protection) Act, 1972:** Schedule I

17th-century Mughal garden to get new lease of life

Anuja.Jaiswal@timesgroup.com

New Delhi: The Delhi state archaeology department has started conservation work at the 17th century garden of Mehram Khan, comprising two gumtis, near Mehram Nagar village, a few miles from IGI airport. The garden is home to several Mughal era ruins and its renovation comes ahead of the G20 Summit next month.

Deputy director (archaeology) Sanjay Kumar Garg told TOI that after getting approval from the defence ministry, work started two days ago. The area, around 40/40 metres, is owned by the defence ministry.

The garden, which had turned into a jungle with wild shrubs everywhere, has been cleaned. The repair and conservation of two gumtis



The garden of Mehram Khan, comprising two gumtis, is located a few miles from IGI airport

inside the garden has started and is likely to be finished by the end of this month.

Since the garden is near the airport, it will be illuminated at the front to highlight to G20 delegates its heritage value.

In 2016, the department of

archaeology, in collaboration with INTACH, started the conservation work and rebuilt one of the two missing gateways and dug out a small tank with a water channel. The work was discontinued in May 2017 after a dispute bet-

ween the state archaeology department and the defence ministry over permission of starting conservation work there. Though the land belongs to the ministry, the structures are on the protected monuments' list of the sta-

te archaeology department, officials said.

According to officials, the garden was made in the late Mughal period and enclosed by rubble masonry walls with octagonal bastions at the north-east and north-west. Its corners are topped with chhatris.

On the north, east and west sides are the remains of baradaris in an advanced stage of decay, while at the north-west is a ruined building, said to have been connected to a well from which water was raised by means of a Persian wheel. The only entrance to the garden was through the north gate of the katra to which it seems to have been originally attached.

Historians said the garden was named after the Mughal courtier, Mehram Khan, a eunuch who was in charge of the Mughal harem. It belongs to

Historians said the garden was named after the Mughal courtier, Mehram Khan, a eunuch who was in charge of the Mughal harem. It belongs to the era under emperor Shahjahan

the period of emperor Shahjahan. The word 'mehram' has an Arabic origin, meaning a close escort and confidant, who can freely talk to and meet women in the king's harem.

According to an Archaeological Survey of India listing the Garden of Mehram Khan was situated near Mehram Nagar village, which is at present near Palam Airport terminal 2.

Context: Restoration work is underway at the **tomb of Muhammad Quli Khan** in Delhi's Mehrauli Archaeological Park ahead of the G20 Summit in September.

Key Points

- In the early 17th century, the **tomb was constructed for the Muhammad Quli Khan**; he was the brother of Adham Khan who was the son of Maham Anga-the wet nurse of Mughal emperor Akbar.
- It was originally **decorated with painted plaster**.
- Later, Sir **Thomas Theophilus Metcalfe**, the Governor General of India (1835-53), converted it into a residence for his use during monsoon and converted the enclosure into a garden with terraces, watercourses and pavilions, it was called as "Dilkhusha" at that time.
- The tomb stands on a **high platform which is octagonal** in plan from outside and square plan from inside.
- The enclosure in which the tomb stands was altered into a garden with **terraces, water courses and pavilions**, traces of which are still found. The interior is exquisitely ornamented with intricate and painted plasterwork.
- The exterior has **designs of stucco plaster** and on the eastern facade, there are remains of glazed tiles in shade of blue, green and yellow.

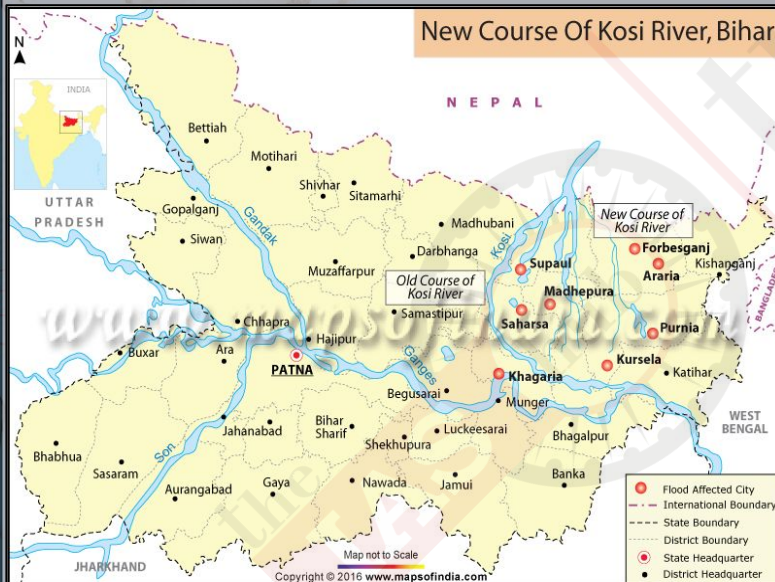
Hundreds of families displaced in north Bihar as swollen rivers break their banks

Koshi, Gandak, Bagmati, Mahananda, Ganga and Adhwara flowing above danger mark at several places; Farmers in the state who were waiting for rains are now witnessing their crops being destroyed



NEXT NEWS >

By Mohd Imran Khan
Published: Friday 11 August 2023



Context: A flood-like situation in low-lying areas of north Bihar districts has forced hundreds of families to flee in search of safer locations.

- With **major rivers and their tributaries in spate**, thousands are in fear of floodwater entering their houses.
- While the **Koshi, Gandak, Bagmati, Mahananda, Ganga and Adhwara** are flowing above the danger mark at several places, they are close to the safe limits in some other regions.
- In the Himalayan reaches, the course of these rivers is **highly tortuous**, but over the plains they display a strong meandering tendency and shift their courses frequently.

Kosi River

- **River Kosi, also known as the 'sorrow of Bihar'**, has been notorious for frequently changing its course.
- The Kosi brings huge quantity of **sediments** from its upper reaches and deposits it in the plains.
- The course gets **blocked**, and consequently, **the river changes its course**.
- The **Kosi is a trans-boundary river** which flows through Tibet, Nepal and India.
- It has its source in Tibet that includes the **world's highest upland**, it then drains a large part of Nepal before emerging onto the Gangetic plains.
- Its **three major tributaries, the Sun Kosi, Arun and Tamur** meet at one point just upstream of a 10 km gorge cut through the Himalayan foothills.
- The **river crosses into northern Bihar, India** where it branches into distributaries before joining the Ganges near Kursela in Katihar district.
- The **Kosi carries the maximum amount of silt and sand** after the Brahmaputra in India.

Bunch of new Placenta in chip devices can help making pregnancies safe

Context: To build a better model which mimics the human placental structure and functions, researchers have developed devices called **placenta-on-a-chip (POC)**.

Key Points

- **Current techniques for studying the placenta** and its conditions are very few and consist of systems that do not resemble the human placenta.
- Some of them involve time consuming traditional **cell culture methods** on tissue culture plates or the sacrifice of mice.
- A **bunch of devices mimicking the placenta** at various stages of pregnancy can help in drug discovery, study of toxicity of chemicals like caffeine, and understanding the effects of conditions such as preeclampsia and diabetes mellitus during pregnancy.
- In pregnancy, the **placenta shields the baby from harmful drugs and chemicals**. But some can still cross this barrier and cause harm to the baby in the womb.
- Thus, pregnant women are not given most medications and they continue to suffer.
- Determining which **medicines can be given during pregnancy** that would not cross the placenta is a daunting task.
- **Animal studies (mostly on mice)** don't provide definitive answers due to differences between human and mouse placentas.
- As a result, the number of medicines declared safe for pregnant women is low and marking new medicines that come into the market as **“pregnancy safe” is a challenge**.

Secure Top Rank with the **IAShub** Courses

Prelims 2023 Courses

01

Prelims Crash Course
Score Enhancement
Program (SEP)

02

INA Current Affairs
(Prelims)

03

TACKLE - Prelims
Test Series

04

Geography - Prelims
Crash Course

Quality Enrichment Courses (Mains 2023)

01

Quality Enrichment Program (QEP)

02

Science of Answer Writing (SAW)

Prelim Cum Mains 2024 Courses

01

NEEV GS Foundation 2024/25

02

INA Current Affairs Pre Cum Mains - 2024

FREE



Download PDF



Login to theiashub.com



**Aaj Ka
Quality Enrichment**
(Toppers' Favourite PDF)



News-CRUX-10
(10 News. 10 Sources. One Place)



Monthly Editorials
(The Hindu & Indian Express)



Daily Quiz (Prelims)



**Government Schemes &
Ministry Wise Year End
Review**



Free Enrichment PDFs
(Tailor Made Crisp Study Material)

FREE

**India's Best Answer Writing Sessions
with**



Ritika Jindal



Simi Karan



Gaurav Budania



Mridul Shivhare

IAS OFFICERS

Log On To Our Unique
Free Answer Writing Sessions with Toppers (FAST) Portal
& Start Practicing!



**SCAN
HERE**



9560082909



t.me/theiashub



www.theiashub.com



/mkyadav



www.theiashub.com