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Daily Current Affairs

To The Point

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GS Paper 2 – Polity and Governance

1 Bombay High Court Highlights Rising Misuse of Matrimonial Laws

Context: In a significant observation, the **Nagpur Bench of the Bombay High Court** recently quashed a criminal case involving **cruelty, unnatural sex, and dowry harassment**, emphasizing that **marriage is a sacred institution**, not a platform for prolonged and **vindictive legal battles**. The verdict sheds light on a growing concern in India—**the misuse of matrimonial laws** for personal gain, revenge, or coercion.

How Are Matrimonial Laws Being Exploited?

Matrimonial laws in India were originally designed to **protect vulnerable spouses**, particularly women. However, in several cases, these laws have been **misused as tools of harassment**:

- **Section 498A, IPC (Cruelty by Husband or Relatives):** Often used to **implicate entire families**, including **distant relatives**, based solely on allegations—many of which **lack substantial evidence**.
- **Section 377, IPC (Unnatural Offences):** Though decriminalized for consensual adult relationships, it is **occasionally invoked strategically** during marital conflicts to exert **pressure or shame**.
- **Dowry Prohibition Act, 1961:** Despite the **real and serious threat of dowry demands**, there are instances where **false accusations are made** to secure leverage in **divorce or property disputes**.
- **Protection of Women from Domestic Violence Act, 2005:** Includes well-intentioned provisions, but is at times **exploited to level exaggerated or baseless claims** of **mental or physical abuse**.

Committees & Commissions Raising Red Flags:

Several authoritative bodies have acknowledged these concerns:

- **Malimath Committee Report (2003):** Recommended making **Section 498A bailable and compoundable**, acknowledging its frequent misuse.
- **Law Commission of India – 243rd Report (2012):** Admitted to misuse but cautioned against weakening protections for genuine victims. Called for **balanced legislative safeguards**.
- **National Commission for Women (NCW):** While fiercely defending women's rights, the NCW has accepted that **frivolous complaints exist** and emphasized the need for **thorough investigations** before arrest.

The Cost of Misuse: Who Really Pays?

- **Emotional & Psychological Toll:** Innocent individuals, especially elderly parents and siblings, suffer **trauma, stress, and social stigma**, often for years, despite **later exoneration**.
- **Straining the Judiciary:** False or exaggerated claims **clog court dockets** and **divert police resources**, delaying justice for those in **genuine distress**.
- **Undermining the Institution of Marriage:** Instead of resolving disputes through dialogue or counseling, many couples **resort to litigation**, transforming **marriage into warfare**.
- **Violation of Article 21: Unjustified arrests and prolonged trials** violate the **right to life and personal liberty**, a fundamental right enshrined in the **Indian Constitution**.

Judicial Stand: Balancing Justice with Sensitivity

Indian courts have taken crucial steps to prevent misuse:

- **Gian Singh v. State of Punjab (2012):** Courts may **quash criminal proceedings** in matrimonial disputes where **both parties reach a settlement**.

- **Narinder Singh v. State of Punjab (2014):** Encouraged quashing of **personal offences** that do not affect **public interest**.
- **Arnesh Kumar v. State of Bihar (2014):** Prevented **automatic arrests** under Section 498A; emphasized **preliminary inquiry** and **procedural safeguards**.

Government Initiatives: Steps Toward Responsible Reform

- **Ministry of Home Affairs Advisory (2015):** Directed police to avoid **mechanical arrests** under Section 498A without **due verification**.
- **CrPC Amendment (2023):** Introduced **stricter guidelines for arrests** in marital disputes.
- **Family Courts and Mediation Cells:** Established across districts to promote **conciliation and quicker resolutions**.
- **Legal Literacy Programs:** Aim to educate both **men and women** about their **rights and responsibilities** in marital relationships.

The Road Ahead: Reform with Responsibility

To ensure justice while **curbing misuse**, experts suggest a **multi-pronged approach**:

- **Make Section 498A Compoundable:** Allow settlements with **court oversight** to avoid **long-drawn criminal trials**.
- **Mandatory Pre-FIR Mediation:** Introduce **cooling-off periods** and counseling before initiating criminal cases.
- **Judicial Training and Sensitization:** Judges must be trained to **distinguish between genuine and malicious complaints**.
- **Punishment for False Allegations:** Use **IPC Section 211** to penalize **deliberate false accusations**, deterring misuse.
- **Gender-Neutral Reforms:** Consider **making relevant laws gender-neutral**, especially in cases involving **mental cruelty or domestic abuse**.

Global Perspective: Misuse Is Not Unique to India

Countries like the **UK, USA, and Canada** have also reported **abuse of protective laws** in matrimonial contexts. Many of them have **introduced mechanisms for early screening**, **pre-trial mediation**, and **penalties for false reporting**—models that India could study and adapt.

Final Thought:

While **protecting vulnerable partners remains essential**, it is equally important to **prevent misuse that weaponizes the law**. The judiciary, legislature, and society must work in tandem to ensure that laws serve as **shields for the innocent**, not **swords for the vindictive**.

GS Paper 3 – Economy

2 Corporate Investment in India: Still Waiting for Takeoff

Context: In a recent release by the **Ministry of Statistics and Programme Implementation (MoSPI)**, the **Index of Industrial Production (IIP)** revealed a concerning trend — industrial growth has **slowed to 1.2%**, marking a **nine-month low**. This slump in industrial output is a reflection of a deeper issue: **corporate investment remains subdued**, despite policy support and economic recovery efforts.

What Is the Index of Industrial Production?

The **IIP** is a key barometer of economic health, tracking the **physical volume of industrial production** across various sectors. It helps policymakers, economists, and businesses gauge short-term changes in the production landscape.

- **Released by**: **National Statistical Office (NSO)**
- **Ministry**: **MoSPI**
- **Frequency**: **Monthly**
- **Current Base Year**: **2011–12**

The IIP is categorized into three main sectors:

- **Manufacturing – 77.6% weight**
- **Mining – 14.4% weight**
- **Electricity – 8.0% weight**

Additionally, it classifies output by usage:

- **Primary Goods**
- **Capital Goods**
- **Intermediate Goods**
- **Infrastructure/Construction Goods**
- **Consumer Durables**
- **Consumer Non-Durables**

Why Has Private Investment Remained Tepid?

Despite numerous policy measures aimed at reviving the economy post-COVID, **corporate investment continues to lag**. Here's a closer look at the underlying reasons:

1. **Demand Uncertainty:** Even as macro indicators improve, **consumer demand remains fragile**, especially in rural and low-income segments. Without clear signs of **sustained demand**, businesses are hesitant to commit to fresh capital investments.

2. **Excess Industrial Capacity:** Several industries are still running below their **optimal production potential**. Companies are first looking to maximize the use of **existing infrastructure** before considering expansion.
3. **Global Volatility: The global environment remains** unsettled**:**
   - **Geopolitical conflicts** (Russia-Ukraine war, Middle East tensions)
   - **Trade disruptions** (Red Sea shipping bottlenecks)
   - **Persistently high global inflation**

These factors contribute to **uncertainty in global demand**, affecting India's **export-oriented industries** and dampening investor confidence.

4. **Sluggish Credit Flow to Industry:** Despite **low repo rates** in recent years, **credit growth to industry** has been modest. Banks have shown a preference for **retail loans** (housing, personal, vehicle loans) over **corporate lending**, which they view as **riskier**.
5. **Infrastructure Bottlenecks:** While schemes like **PM Gati Shakti** aim to improve logistics and infrastructure, **high logistics costs**, **project clearance delays**, and **land acquisition hurdles** continue to deter investment.
6. **Low FDI in Core Sectors:** Foreign Direct Investment (FDI) remains **skewed towards services and tech**, with **limited inflows in manufacturing and infrastructure**. Even with **Production Linked Incentive (PLI) schemes**, foreign investors cite challenges such as:
   - **Scale limitations**
   - **Regulatory red tape**
   - **Exit restrictions**
7. **Weak Public Capex Multiplier:** Though the central government has increased capital expenditure, the **'crowding-in' effect** on private investment is **yet to fully materialize**. **States**, often key players in infrastructure development, have shown **weak capex performance** due to **tight fiscal conditions**.

What Has the Government Done So Far?

To stimulate investment and industrial activity, several initiatives have been launched:

- **Corporate Tax Cut (2019)**: Reduced from **30% to 22%** for domestic companies — aimed at increasing profitability and reinvestment.
- **Infrastructure Push**: Recent Union Budgets have prioritized **high public investment in infrastructure**, including **roads, railways, and housing**.
- **Monetary Easing**: The **Reserve Bank of India (RBI)** implemented **low interest rate policies** post-COVID to reduce borrowing costs.
- **PLI Schemes**: Sector-specific incentives to encourage **manufacturing and value-added production** in areas like electronics, pharmaceuticals, and textiles.

The Core Issue: Demand First, Then Investment

At the heart of the issue is **demand-side weakness**. The private sector, facing uncertainty about **future consumption patterns**, is adopting a **wait-and-watch approach**. No amount of tax cuts or interest rate reductions can substitute for **visible and sustained demand growth**.

The Way Forward: Coordinated and Demand-Driven Strategy

For private investment to pick up meaningfully, India needs to look beyond **supply-side incentives**. Here's what could help:

- **Boost Consumption**: Strengthen demand through **targeted income support**, **rural employment schemes**, and **urban job creation**.
- **Deepen Financial Access**: Encourage **risk-based lending** to industry with appropriate **credit guarantees** and **NBFC involvement**.
- **Accelerate Logistics Reforms**: Implement **multi-modal transport systems** and **single-window clearances** under PM Gati Shakti more aggressively.
- **Enhance Investor Confidence**: Ensure **regulatory predictability**, **fast dispute resolution**, and **ease of exit** to attract more FDI in core sectors.
- **Promote Green Industrialization**: Link industrial revival with **clean energy and sustainability goals**, creating **new-age jobs and industries**.

GS Paper 3 – Science & Technology

3 Scientists Discover Key Pheromone Behind Locust Swarms: A Breakthrough in Eco-Friendly Pest Control

Context: In a groundbreaking study, scientists have uncovered how a specific **pheromone triggers swarming behaviour in locusts**, potentially opening the door to **environmentally safe and effective control methods**. The discovery could revolutionize how the world tackles locust outbreaks that threaten food security across continents.

The Threat of Locust Swarms:

Locusts, a type of **short-horned grasshopper**, are known for their ability to shift between two distinct phases:

- A **solitary phase**, where they behave independently
- A **gregarious phase**, where they form large, **highly mobile swarms** capable of destroying entire fields of crops within hours

Historically, **locust invasions have caused massive agricultural devastation**, particularly in regions like **East Africa, the Middle East, and South Asia**. The **2019–2020 outbreak** was the worst in 25 years, affecting **millions of hectares** of farmland and endangering the **livelihoods of millions**.

India is home to four main locust species**:**

- **Desert Locust (Schistocerca gregaria)** – the most destructive and widely distributed
- **Migratory Locust (Locusta migratoria)**
- **Bombay Locust (Nomadacris succincta)**
- **Tree Locust (Anacridium spp.)**

Among these, the **Desert Locust** poses the greatest risk due to its **cross-border migration** and **voracious appetite**.

Understanding Gregarious Behaviour:

Locusts and many other insects exhibit a social trait known as **gregariousness** — the tendency to **form groups or colonies** as a survival mechanism. When triggered, this behaviour causes locusts to **aggregate**, travel in huge swarms, and consume everything in their path.

The key lies in **chemical communication**. In 2020, scientists identified a critical pheromone called **4-vinylanisole (4VA)**. This compound is:

- **Released by locusts from their hind legs after feeding**
- **Detected by other locusts via the antennae**, prompting them to gather and initiate **swarm formation**
- Triggers the release of **serotonin**, a brain chemical that reinforces gregarious behaviour

This newly discovered **chemical chain reaction** is what turns a few locusts into a **destructive army**.

New Study Unlocks Pheromone-Based Control:

In a recent advancement, researchers found that **interrupting or manipulating the production of 4VA** could stop the swarming process **before it starts**. This could be a major alternative to **conventional pesticides**, which often cause **long-term damage to ecosystems, soil health, and biodiversity**.

The Five-Pronged Strategy to Stop Swarming:

The study proposes an innovative and **eco-friendly five-step plan** to manage locust populations:

1. **Synthetic Lures & Targeted Traps:** Use **synthetic versions or analogues of 4VA** to **attract locusts to designated areas**, where they can be eliminated using **biopesticides or fungal pathogens** — avoiding large-scale pesticide use.
2. **Disrupting Pheromone Signals**: Spray **4VA blockers or disruptors** across regions to prevent **locusts from congregating**, thereby stopping swarm formation at its roots.
3. **Real-Time Monitoring**: Track **4VA emissions** in the environment to **monitor locust activity** and anticipate potential outbreaks.
4. **Genetically Modified Locusts**: Introduce **non-gregarious, genetically altered locusts** into the population to reduce the overall tendency of swarming in future generations.
5. **Combined Molecular & Biological Approach**: Deploy **small-molecule inhibitors** alongside **bio-friendly insecticides** for a **multi-layered, sustainable control system**.

Why This Matters:

Traditional pesticide-based locust control methods are:

- **Expensive and resource-intensive**
- **Environmentally damaging**
- **Harmful to non-target species**, including pollinators and soil organisms

This new pheromone-based strategy offers:

- **Precision targeting**
- **Lower ecological impact**
- **Potential for long-term population control**

Furthermore, the approach aligns with **global goals for sustainable agriculture** and supports the **United Nations' Zero Hunger agenda**.

Final Thoughts: Turning Chemistry Into a Solution

This discovery marks a **turning point in agricultural pest control**. By harnessing the **natural behaviour of locusts**, scientists have developed a method that is **smart, targeted, and sustainable**. As the climate crisis continues to amplify the risks of locust plagues, such innovations could be key in **protecting global food supplies** without harming the environment.

The future of locust control may no longer lie in killing indiscriminately — but in understanding how these insects think, feel, and follow the chemical signals nature has built into them.

GS Paper 3 – Environment and Biodiversity

4 New Gecko Species Named After Brahmaputra River Discovered in Assam

Context: A **newly discovered species of gecko**, *Cnemaspis brahmaputra*, has been recorded from **Assam**, bringing fresh insights into the biogeographical history of the Indian subcontinent. This unique lizard was found at the **Dirgheswari Temple**, located on the **northern bank** of the **Brahmaputra River**, one of India's mightiest rivers.

Belonging to a Sri Lankan Lineage:

Cnemaspis brahmaputra is a member of the **podihuna clade**, a group of **small, diurnal geckos** primarily known from **Sri Lanka**. Its presence in **Northeast India** is highly significant—it offers **strong evidence** of an **ancient faunal connection** between **Sri Lanka and Northeast India**, regions that are now geographically distant but may have once shared ecosystems due to shifting landmasses and climate patterns.

Genetically Unique and Morphologically Distinct:

Despite its evolutionary roots in Sri Lanka, *Cnemaspis brahmaputra* shows **significant genetic divergence** and **distinct morphological traits**, which firmly establish it as a **new and separate species**. Some of its **key features** include:

- **Larger body size** compared to its relatives
- **Fewer mid-body scale rows**
- **More ventral scales** across the belly
- **Absence of tubercles** on the lower flanks
- **Three enlarged rows of thigh scales** parallel to the enlarged femoral scale row

These traits make it easily distinguishable from other known members of the **Cnemaspis genus**.

A Rare Find in the Northeast:

Cnemaspis brahmaputra is only the **second species of this genus** to be discovered in **Northeast India**. The first, *Cnemaspis assamensis*, was described in **2000** and is found on the **southern bank** of the Brahmaputra. Interestingly, while both species belong to the **same clade**, they are found on **opposite sides of the river** and exhibit **considerable genetic differences**, suggesting a long period of **independent evolution**.

Why This Discovery Matters:

This find not only enriches India's **reptilian biodiversity** but also supports the theory of **ancient land and species migrations** across South Asia. It demonstrates how **natural barriers** like the **Brahmaputra River** can influence the **distribution and evolution of species** over time.

Moreover, the discovery highlights the **ecological and conservation value** of temple forests and sacred groves, which often harbor **undocumented wildlife**. The Dirgheswari Temple site, though a place of worship, is now also recognized as a hotspot for **herpetological research**.

Did You Know?

- The **genus *Cnemaspis*** includes over **180 species worldwide**, with **many endemic** to **South and Southeast Asia**.
- The **podihuna clade**, once thought restricted to Sri Lanka, is now known to extend into **India's northeast**, thanks to discoveries like this.

- Geckos in this genus are **diurnal**, meaning they are active during the **day**, unlike most of their nocturnal cousins.

Conclusion: The discovery of *Cnemaspis brahmaputra* underscores the **rich but underexplored biodiversity** of Northeast India. It also emphasizes the need for **continued field research and conservation efforts**, especially in ecologically sensitive zones like the **Brahmaputra Valley**. As scientists delve deeper into such habitats, more **hidden species** and **evolutionary stories** are sure to emerge from the folds of time and terrain.

GS Paper 3 – Biodiversity and Environment

5 Kaziranga National Park Unveils First-Ever Grassland Bird Survey Report

Context: In a significant development for Indian wildlife research, **Kaziranga National Park and Tiger Reserve** has released its **first Grassland Bird Survey Report**, spotlighting the diversity of avian species that thrive in the rich **Brahmaputra floodplains**. This report not only identifies key **grassland habitats** but also highlights the presence of several **threatened bird species**, marking a new chapter in the park's ongoing conservation legacy.

About Kaziranga National Park:

Located in the northeastern state of **Assam**, **Kaziranga National Park** is one of India's most celebrated natural reserves. It represents the **largest undisturbed stretch of the Brahmaputra Valley floodplain**, a landscape of immense ecological importance. The park was declared a **UNESCO World Heritage Site** in **1985** in recognition of its outstanding biodiversity.

A Landscape of Wild Beauty:

Kaziranga is characterized by a vibrant mosaic of habitats, including:

- **Tall elephant grass**
- **Dense forests**
- **Marshes and swamplands**
- **Shallow water bodies**

The **Diffalu River**, a tributary of the **Brahmaputra**, flows through the park, while the **Moradifalu River** outlines its southern edge, enriching the terrain with alluvial nutrients and supporting diverse flora and fauna.

Rich in Wildlife: A Sanctuary for the Rare and Endangered

Kaziranga is globally renowned for being the **home to the world's largest population of the Indian one-horned rhinoceros**. Apart from rhinos, the park also shelters:

- **Royal Bengal Tigers**
- **Asian Elephants**
- **Eastern Swamp Deer**
- **Wild Buffaloes**
- **Hoolock Gibbons**
- **Capped Langurs**
- **Gangetic River Dolphins**

Its **floral diversity** includes a mix of **elephant grass**, **water lilies**, **lotus**, and **water hyacinths**, supporting a delicate ecological balance.

Key Highlights from the Grassland Bird Survey:

The groundbreaking **Grassland Bird Survey**, conducted by **ornithologists, conservationists, and scientists**, recorded a total of **43 species of grassland birds** across **Kaziranga's three wildlife divisions**. Among the most notable findings:

- The **Finn's Weaver** (*Ploceus megarhynchus*), locally called **Tukura Chorai**, was found to be **breeding successfully**—a **positive indicator** of **healthy grassland ecosystems**.
- The species is listed as **Endangered** on the **IUCN Red List** and is known for its unique habit of **building elaborate nests atop trees**.
- The presence of this rare bird indicates that **Kaziranga's floodplain grasslands** are maintaining strong ecological function, crucial for both **avian life and broader biodiversity**.

Did You Know?

- **Kaziranga** is also recognized as an **Important Bird Area (IBA)** by **BirdLife International**, highlighting its role in global bird conservation.
- The **Finn's Weaver** was first described by Allan Octavian Hume in the 19th century and is now found in very **limited pockets** in India, making Kaziranga's record extremely important.
- Grassland birds are among the **most threatened bird groups** globally due to habitat loss and degradation.

Looking Ahead: The release of the **Grassland Bird Survey Report** is more than just a scientific document—it's a **wake-up call to protect fragile ecosystems** that sustain both **iconic mammals and lesser-known yet vital bird species**. It also strengthens Kaziranga's reputation as a **model for conservation**, not just for its megafauna, but for its **entire ecosystem**.

GS Paper 1 – Geography

6 Klyuchevskoy Volcano Erupts with Fiery Intensity: A Spectacle from the Ring of Fire

Context: In a dramatic display of volcanic power, the **Klyuchevskoy Volcano** in **Russia's Kamchatka Peninsula** was recently captured in a striking **false-color satellite image** from 2023. The photo shows a **pair of lava flows** glowing red-hot alongside a massive **plume of smoke**—a vivid reminder of the volatile forces at work beneath the Earth's surface.

About Klyuchevskoy: The Tallest Active Volcano in Eurasia

Standing at a height of **4,750 meters (15,584 feet)**, **Klyuchevskoy** is not only the **highest point on the Kamchatka Peninsula**, but also the **tallest active volcano in both Europe and Asia**. This imposing **stratovolcano**, located in **far eastern Russia**, is a part of the **Pacific Ring of Fire**—the world's most seismically active region.

Klyuchevskoy features:

- A **truncated conical summit** with a central crater
- Around **70 lateral craters and parasitic cones** on its lower slopes
- Almost **continuous emission of smoke and gas** from its summit
- A history of over **50 eruptions since the year 1700**

At its base sits the **Kamchatka Volcanological Station**, founded in **1935**, one of the oldest volcano research centers in the world.

Kamchatka Peninsula: Land of Fire and Ice

The **Kamchatka Peninsula** is one of the most geologically active regions on Earth. It lies between the **Sea of Okhotsk** to the west and the **Pacific Ocean** and **Bering Sea** to the east. Two prominent mountain ranges—the **Sredinny Range** (Central) and the **Vostochny Range** (Eastern)—define its rugged terrain.

Key highlights of the peninsula include:

- **68 active volcanoes**, accounting for **over 10% of all land volcanoes worldwide**
- Severe **subarctic climate** with **long, snowy winters** and **cool, wet summers**
- Located along the **Kuril-Kamchatka arc**, part of the **2000-kilometer-long volcanic belt**
- A crucial segment of the **Pacific Ring of Fire**, known for frequent earthquakes and eruptions

Why Klyuchevskoy Matters:

Klyuchevskoy's activity offers vital data for understanding **volcanic behavior**, tectonic movements, and the **Earth's geothermal dynamics**. It is not only a **natural laboratory for geologists** but also a **symbol of nature's power**—rising from the icy Russian wilderness as a sentinel of fire.

The volcano is **monitored constantly** for potential hazards, and its frequent eruptions pose risks to **air traffic**, **local ecosystems**, and **nearby communities**, though it remains largely isolated due to Kamchatka's low population density.

Did You Know?

- Klyuchevskoy was first documented by European explorers in the **17th century**.

- The volcano's name is derived from **"Klyuchi,"** a nearby settlement meaning "springs" in Russian.
- Some of Klyuchevskoy's **lava fountains** can reach over **1 kilometer high**, making it one of the most visually spectacular volcanoes on Earth.
- The **UNESCO-listed "Volcanoes of Kamchatka"** World Heritage Site includes Klyuchevskoy and its neighboring peaks.

A Fiery Future:

As part of the **ever-shifting Pacific Rim**, **Klyuchevskoy Volcano** will continue to erupt, reshape the landscape, and contribute to our understanding of Earth's inner workings. Each fiery outburst is both a **geological marvel** and a **reminder of the raw power of nature**, deep in the heart of the Russian Far East.