



Daily Current Affairs



To The Point by Dhananjay Gautam

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1 Global Cybersecurity Outlook 2025: Navigating Emerging Threats

Context: The World Economic Forum (WEF), in collaboration with Accenture, recently released the **Global Cybersecurity Outlook 2025**. This insightful report delves into the **cybersecurity trends** that will shape economies and societies in the near future. It highlights the evolving complexity of the **cybersecurity landscape**, influenced by factors such as **geopolitical tensions**, emerging technologies, **supply chain vulnerabilities**, and the growing sophistication of **cybercrime**.

**Key Issues Identified in Global Cybersecurity Outlook 2025:**

- Geopolitical Conflicts:** Ongoing conflicts, including the **Ukraine war**, have heightened **cyber vulnerabilities** in critical sectors like **energy**, **telecommunications**, and **nuclear power**. These tensions have made national and global infrastructures more susceptible to cyberattacks.
- Cybersecurity Readiness:** **Two-thirds** of organizations expect **AI** to impact cybersecurity, but only **one-third** have the necessary tools to assess AI-related risks. Smaller organizations, in particular, face significant challenges in adapting to these new threats.
- Cyber Skills Gap:** As of **2024**, the cybersecurity workforce is short by **4.8 million** professionals. Only **14%** of organizations possess the skilled workforce needed to tackle today's cybersecurity challenges, with **public-sector organizations** bearing the brunt of this shortage.
- Supply Chain Interdependencies:** Over **50%** of large organizations consider the **complexity of supply chains** a major barrier to **cyber resilience**. Key concerns include vulnerabilities in third-party software, the increasing frequency of **cyberattacks**, and difficulties in enforcing security standards across the supply chain.
- Cybercrime Sophistication:** **Cybercriminals** are now using advanced **generative AI** tools to carry out **personalized attacks**, including **phishing** and **social engineering**. In **2024**, **42%** of organizations reported experiencing attacks such as **phishing** and **deepfakes**.
- Regulatory Challenges:** A significant **70%** of organizations find existing **cybersecurity regulations** too complex, leading to **compliance difficulties** and a fragmented approach to global cyber defense.

Impact of Cybersecurity Threats:

- Critical Infrastructure Vulnerabilities:** Cyberattacks on essential services such as **water utilities**, **satellites**, and **power grids** pose serious threats to **public safety**. For instance, a **2024** cyberattack on a U.S. water utility disrupted critical services, highlighting the risks to **infrastructure**.
- Biosecurity Risks:** **AI advancements**, cyberattacks, and **genetic engineering** could disrupt laboratories and **public health systems**. This was evidenced by cyber incidents in **South Africa** and the **UK**, which exposed biosecurity vulnerabilities.
- Economic Disparity:** There is a growing **cyber resilience gap** between developed regions (**Europe**, **North America**) and emerging economies (**Africa**, **Latin America**). While developed nations are better equipped to tackle cyber threats, emerging economies face greater risks due to limited resources.



4. **Renewable Energy Transition Issues:** The shift toward **renewable energy** systems brings new cybersecurity challenges. **Power grids** are becoming prime targets for **cybercriminals**, as seen in attacks targeting energy infrastructure.

Suggestions and Way Forward:

1. **Strategic Investment in Cybersecurity:** Cybersecurity should be viewed as a **strategic investment** rather than merely a technical issue. **Leadership** must focus on both **economic** and **technical dimensions** to ensure robust cyber defenses.
2. **Foster Collaboration:** There is a growing need for **stronger collaboration** between **business leaders** and **cybersecurity experts** to proactively manage emerging threats and minimize risks.
3. **Simplify and Harmonize Regulations:** **Global cybersecurity regulations** must be simplified and aligned to enhance **compliance** and **resilience** across borders, helping organizations better navigate regulatory complexities.
4. **Address the Cyber Skills Gap:** **Upskilling** and **training programs** are essential to bridge the global **cyber skills gap**. Organizations must invest in workforce development to prepare for the challenges ahead.
5. **Focus on Emerging Technologies:** As **AI** continues to reshape cybersecurity landscapes, organizations must **develop tools** to assess and mitigate the risks associated with AI, ensuring a proactive approach to security in the digital age.

The **Global Cybersecurity Outlook 2025** offers vital insights into the evolving cyber landscape, urging global stakeholders to take strategic actions to strengthen defenses and safeguard against future cyber risks.

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2 India-Bangladesh Border Dispute: Challenges in Fencing and Border Security

Context: The ongoing **India-Bangladesh border dispute** has raised tensions over issues related to **border security** and **fencing**. Recently, **India** summoned **Bangladesh's Acting High Commissioner** after **Bangladesh** expressed concerns about the **Border Security Force (BSF)** allegedly violating bilateral agreements. These concerns have escalated, especially after **Border Guards Bangladesh (BGB)** attempted to halt **fencing construction** in the **West Bengal-Malda** border region. This border, spanning over **4,096.7 km**, remains a long-standing source of disputes over **barbed wire fencing** and **border management**.



India-Bangladesh Border (IBB):

The **India-Bangladesh border** is the longest border India shares, measuring **4,096.7 km**. It runs through several states, including **West Bengal (2,216.7 km)**, **Assam (263 km)**, **Meghalaya (443 km)**, **Tripura (856 km)**, and **Mizoram (318 km)**. The border is characterized by varied geographical features like **plains, hills, riverine stretches**, and **forests**, with **no significant natural barriers**. The highly porous nature of the border has made it a hotspot for illegal activities, such as **immigration, cattle smuggling, and human trafficking**.

Status of Fencing Along the India-Bangladesh Border:

Overall Fencing Coverage:

Out of the total **4,096.7 km** of the **India-Bangladesh border**, **3,141 km** have been successfully fenced, covering all **eastern states**, including **West Bengal**. However, challenges persist in some regions due to geographical, social, and political factors.

Fencing in West Bengal: West Bengal shares the largest portion of the border, **2,216.7 km**, and as of **2023**, **81.5%** of it has been fenced. However, there are still small **unfenced patches** due to:

- **Objections from villagers**
- **Challenging terrain**
- **Ongoing negotiations with Bangladesh**

Challenges in Fencing Completion:

The **Ministry of Home Affairs** has highlighted several **delays** in fencing construction, including:

- **Non-cooperation** from the **West Bengal government**
- **Pending land acquisition**
- The **riverine nature** of over **900 km** of the border, which makes fencing impractical. These areas are secured by the **BSF's water wing**.

Recent Fencing Incidents:

Fencing Incident in Malda's Kaliachak Block:

The **BSF** and the **Central Road Works Department** were involved in constructing a **single-row fence** in **Malda's Kaliachak No. 3 block**, near **Bangladesh's Shibganj** in **Rajshahi district**. **Border Guards**

Bangladesh (BGB) objected to this construction. Despite their objections, the work continued after discussions.

Fencing Dispute in Mekhliganj, Cooch Behar:

On **January 10**, villagers in **Mekhliganj** began constructing a **four-foot-high barbed-wire fence** near the **Bangladeshi enclave of Dahagram-Angarpota**, with support from the **BSF**. This was intended to prevent **cattle** from crossing over into Indian farms. **BGB** intervened to halt the work, escalating tensions between the two countries once again.

India-Bangladesh Border Guidelines:

1975 Joint Guidelines:

The **1975 India-Bangladesh Joint Guidelines** prohibit the construction of **defense structures** within **150 yards** of the international boundary, commonly referred to as the **zero line**. While **India** does not classify **wire fencing** as a defense structure, **Bangladesh** and **Pakistan** do.

Challenges in Fencing Due to Border Complexity:

The **2,217 km** long border in **West Bengal** is especially complicated by:

- **Villages** and **rivers** along the boundary
- **Enclaves** such as **Dahagram-Angarpota** where **Bangladesh** is located within India
- The terrain, where sometimes the **zero line** coincides with **houses** or **villages**, complicating fencing efforts.

Exceptions to the 150-Yard Rule:

When fencing near the **zero line** is deemed impractical due to terrain, population, or water bodies, **mutual negotiations** between India and Bangladesh allow for **exceptions**. Fencing is sometimes built **closer** to the border, with **gates installed** to facilitate the movement of residents.

Reasons for the Dispute:

Violation of the 1975 Agreement:

Bangladesh argues that the construction of fencing, especially **single-row fencing (SRF)**, violates the **1975 India-Bangladesh guidelines**, particularly because it occurs within the **150-yard** zone from the border.

Impact on Border Residents:

Fencing has created inconveniences for residents, **restricting movement** and **daily activities** along the border. However, **India** maintains that **SRF** is not a **defense structure** but a measure to control **animal movement** and curb **cross-border crimes**.

Objection to Smart Fencing:

Bangladesh has raised concerns about **smart fencing**, which includes **CCTV** and **electronic surveillance**, fearing that it enables **India** to monitor their territory. **Smart fencing** is primarily installed in areas where villages are located within **150 yards** of the border or on the border itself.

Ongoing Discussions:

The **fencing dispute** has been under continuous discussion for over **five years**, with frequent **objections** raised by **Bangladesh Border Guards (BGB)** during **flag meetings**. Both nations continue to negotiate the complexities of **border security** and the **fencing process**, with the aim to achieve a mutually agreeable resolution.

3 Bhargavastra: India's Revolutionary Counter-Swarm Drone Micro-Missile System

Context: India has successfully tested the **Bhargavastra**, a cutting-edge **micro-missile system** designed to counter the emerging threat of **swarm drones**. This indigenous defense technology marks a significant advancement in the country's **military capabilities**, especially in countering aerial threats posed by drones.



What is Bhargavastra?

The **Bhargavastra** is India's **first indigenous micro-missile system**, specifically engineered to neutralize the growing menace of **swarm drones**. Developed by **Economic Explosives Ltd**, this advanced system is designed for **quick deployment on mobile platforms**, enabling it to target aerial threats with remarkable precision.

- **Range:** Capable of hitting targets over **2.5 kilometers** away.
- **Detection:** The system can detect even small incoming flying machines at distances over **6 kilometers**.
- **Micro Munitions:** It uses **micro munitions** that are **guided** towards the threat to ensure accurate strikes.
- **Capacity:** The Bhargavastra can simultaneously launch over **64 micro missiles** to counter multiple threats.
- **Versatility:** Designed to operate in **all terrains**, including **high-altitude areas**, making it suitable for various military environments.
- **Use in Army Air Defence:** This system meets the specific requirements of the **Army Air Defence** and is the first **counter-drone system** utilizing **micro missiles**.

What Are Swarm Drones?

The term **SWARM** stands for "**Smart War-Fighting Array of Reconfigured Modules.**" **Drone swarm technologies** involve the coordination of multiple drones—ranging from a few to potentially thousands—that work together to accomplish missions with minimal human oversight.

Capabilities of Drone Swarms:

- **Cooperative Missions:** Drone swarms can perform tasks such as **wildfire control**, **damage assessment**, and **fire suppression** efficiently by collaborating without the need for constant human control.
- **Robustness and Efficiency:** Swarms are more effective than individual drones, as they can perform various tasks simultaneously and continue operating even if some drones malfunction or become inoperable.
- **Advanced Technology:** These swarms use sophisticated **computer algorithms**, **local sensing**, and **communication technologies** to synchronize their movements and achieve shared objectives.
- **Methods of Control:** Swarms can operate with several command structures, including:
 - **Pre-programmed missions** with defined flight paths.
 - **Centralized control** from a ground station or a leading drone.



- **Distributed control**, where drones communicate and collaborate autonomously based on shared information.

Why Bhargavastra Matters:

With the rise of **swarm drone technologies**, which can overwhelm traditional defense systems, the **Bhargavastra** provides a critical defense mechanism for India's military forces. By offering the ability to quickly detect, engage, and neutralize **drone swarms**, it enhances **air defense capabilities** and helps protect **strategic assets** from advanced aerial threats.

This system underscores India's commitment to building **indigenous defense solutions** and strengthening its ability to counter modern warfare challenges effectively.



4 Call for Renaming India-Linked Fungus: A Global Health Concern

Context: A group of dermatologists from 14 countries, including India and Germany, has called for a change in the regional naming of a novel fungal species, *Trichophyton indotineae*, which is responsible for difficult-to-treat skin infections. The dermatologists argue that naming this fungus after specific geographic regions promotes prejudice, spreads misinformation, and goes against global health guidelines set by major health organizations like the World Health Organization (WHO).

**About Trichophyton Indotineae:**

- **Identification:** First identified in 2020 by Japanese dermatologists, this fungus was found in patients from India and Nepal.
- **Historical Naming Practice:** The fungus was named following a historical practice of linking infectious agents to specific geographical regions, an approach the dermatologists believe fosters stigma.
- **Early Classification:** Initially categorized as a variant of *Trichophyton mentagrophytes*, also referred to as **Internal Transcribed Spacer (ITS) genotype VIII/T. interdigitale**.
- **Global Spread:** Cases have been reported across multiple continents, including Europe, the Middle East, North America, and Asia, primarily due to travel and migration from South Asia.
- **Transmission:** The fungus is mainly transmitted through person-to-person contact, such as skin-to-skin interactions and sharing personal items. Emerging evidence also suggests sexual contact may be another mode of transmission.
- **Symptoms:** It causes inflammatory and itchy dermatophytosis, typically affecting areas like the groin, gluteal region, trunk, and face.
- **Antifungal Resistance:** This fungus shows significant resistance to terbinafine, a common antifungal drug, due to mutations in the squalene epoxidase gene, making treatment challenging.
- **Global Health Threat:** Found in over 40 countries, *Trichophyton indotineae* is now a global health concern.

Concerns Raised by Dermatologists:

The dermatologists have highlighted the following concerns regarding the fungus's naming:

- **Stigmatization:** Naming infectious agents after specific locations fosters stigma, racial prejudice, and misinformation.
- **Contradiction with Global Guidelines:** The naming of *Trichophyton indotineae* goes against the World Health Organization's (WHO) guidelines, which recommend avoiding geographical names for pathogens.
- **Scientifically Unsubstantiated Naming:** The fungus was named after isolates from only two patients—one from India and one from Nepal—making the region-specific naming scientifically questionable.
- **Unclear Origin:** The true origin of the fungus is still unknown, rendering a regional name inappropriate.

Internal Transcribed Spacer (ITS):

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The **Internal Transcribed Spacer (ITS)** is a genetic marker crucial for identifying and analyzing fungal species.

- **Genetic Marker:** Found in the **ribosomal RNA gene cluster**, ITS plays a role in regulating **rRNA production** but does not code for proteins.
- **Fungal Identification:** Its high variability makes it ideal for distinguishing **fungal species**, including **Trichophyton indotineae**.
- **Molecular Diagnostics:** ITS is widely used in **molecular diagnostics** to identify **fungi** accurately.

The Call for Change:

The dermatologists are urging health organizations and scientists to reconsider the **regional naming** of **Trichophyton indotineae** and adopt a more **neutral** and **scientifically sound approach** that avoids perpetuating harmful stereotypes or geographical associations. This call aligns with the **global health community's commitment** to accurate, non-biased scientific practices that foster collaboration and unity across borders in tackling global health issues.



5 The Flat-Top Sada of Konkan: A Biodiversity Treasure

Context: Recent studies on the **biodiversity** and **ecosystem** of the **Konkan region** have brought attention to the unique **sada**—the flat-topped **lateritic plateaus** that are characteristic of this coastal area. These plateaus are gaining recognition for their role in preserving diverse flora and fauna, while also offering valuable insights into **prehistoric** human life.

**What is Konkan Sada?**

- **Geography:** Located between the **Arabian Sea** and the **Western Ghats**, the Konkan region is known for its striking **sadas** or flat-topped plateaus, particularly in the **Ratnagiri district**.
- **Formation:** These plateaus are the result of centuries of **erosion**, with terrain resembling that of the **Kaas Plateau** in **Satara district**, which is known for its rocky surface.
- **Significant Plateaus:**
 - **Sadawaghapur Plateau:** Situated on the **Tarle-Patan road** in **Patan tehsil, Satara district**, this plateau comes alive with vibrant **wildflower blooms** during the **monsoon**, attracting both tourists and nature enthusiasts.
 - **Barsu Sada:** Located near **Rajapur** in **Ratnagiri district**, this plateau is famous for its **ancient petroglyphs**, offering a glimpse into the prehistoric human activities that once shaped the region.

Biodiversity Hotspot:

A study conducted from **2022 to 2024** has recorded an impressive range of species:

- **459 plant species**, including **105 endemic species**.
- **31 reptile species, 13 amphibians, 169 bird species, and 41 mammal species**.
- The **Indian flapshell turtle (Lissemys punctata)**, a vulnerable species, along with **leopards, jackals**, and various **migratory birds**, call this region home.

During the **monsoon**, the once barren plateaus are transformed into lush habitats that support this unique and diverse ecosystem.

Water and Agriculture on the Sadas:

- Villages situated on the **sadas** rely on **open wells, springs, and perennial streams** for their water needs.
- The **lateritic soil**, highly weathered over time, acts as a **natural rainwater catchment**, effectively replenishing the **groundwater** supply.
- Locals engage in traditional, **pesticide-free farming** of **rice** and **millets (Eleusine coracana)**, particularly during the **monsoon season** on small patches of the **sadas**.

Threats to the Sadas:

While these plateaus are home to diverse life forms, they face several challenges:

- **Laterite stone extraction**, a major activity, threatens the integrity of these plateaus.
- The region has been labeled as '**wasteland**' in the **Wasteland Atlas**, hindering efforts to protect and recognize its **ecological significance**.



The Significance of Geoglyphs:

- **Geoglyphs** are large **designs** or **motifs** created on the ground by removing soil or using rocks to create patterns that contrast with the surrounding landscape.
- The **Konkan region**, particularly **Barsu Sada**, is home to **10,000-year-old geoglyphs**, offering insights into **prehistoric human life** and their **cultural expressions**.

Indian Flapshell Turtle (*Lissemys punctata*):

- **IUCN Status: Vulnerable**
- **Native Range:** Found across **South Asia**, including **India, Pakistan, Sri Lanka, Nepal, and Bangladesh**.
- Prefers freshwater ecosystems such as **ponds, rivers, marshes, and lakes**.
- Found in **National Parks** like:
 - **Keoladeo National Park** (Rajasthan)
 - **Kaziranga National Park** (Assam)
 - **Sundarbans National Park** (West Bengal)

Conclusion: A Unique Ecosystem at Risk

The **Konkan sadas** are not only geological wonders but also vital **biodiversity hotspots**. The region's unique ecosystems, combined with its rich cultural heritage, make it a treasure worth preserving. However, threats like **stone extraction** and the mislabeling of the land as **wasteland** threaten the delicate balance of this precious environment.

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6

Rooster Fights Persist in Andhra Pradesh Despite Police Warnings

Context: **Kodi Pandem**, the illegal rooster fighting sport, has deep roots in the rural areas of **Andhra Pradesh**, especially during the **harvest festival**. Despite being banned by the **High Court of Andhra Pradesh** in **2016** and being illegal under both the **Prevention of Cruelty to Animals Act, 1960** and the **Andhra Pradesh Gaming Act, 1974**, this brutal sport continues to thrive, fueled by strong local patronage.

**Recent Developments: Police Efforts and Technology in Action:**

- **Police Raids:** As the festival of **Sankranti** approaches, police forces in **Andhra Pradesh** have stepped up their efforts to crack down on **rooster fights**, targeting **organizers, knife manufacturers, and habitual offenders**. Special task forces have been formed to monitor and stop these illegal activities.
- **Use of Technology:** In an innovative approach, the **Andhra Pradesh police** are utilizing **drones and artificial intelligence (AI)** to **track and prevent** rooster fights during the festival season, reflecting a modern approach to enforcing the law.
- **Financial Stakes:** Despite the **ban**, these rooster fights continue to involve significant amounts of money, highlighting the ongoing cultural importance of the practice and the financial incentives that keep it alive.

The Prevention of Cruelty to Animals Act, 1960:

The **Prevention of Cruelty to Animals Act, 1960** is a key law aimed at ensuring the welfare of animals by preventing unnecessary harm or suffering. Some key provisions include:

- **Cruelty (Section 11):** This section defines cruelty to animals, prohibiting activities like **beating, kicking, torturing, or overloading** animals. It also outlaws the **organizing or participating** in animal fights.
- **Animal Welfare Board of India (AWBI):** Section 4 establishes the **AWBI**, which works to promote animal welfare, advise the government, and ensure the enforcement of the Act.
- **Exemptions (Section 28):** The law allows for the **humane killing** of animals in specific contexts, such as for food or religious purposes.

State-Wise Animal Fights in India:

Although **Kodi Pandem** is banned, various forms of **animal fights** continue to take place across **India** during festivals. Here's an overview of such events:

- **Jallikattu (Tamil Nadu):** A **bull-taming** event during **Pongal**, where participants attempt to hold onto a bull's hump.
- **Cockfights (Kodi Pandem) (Andhra Pradesh, Telangana, Kerala):** Roosters with **blades attached** to their legs fight, especially during **Sankranti**.
- **Kambala (Karnataka):** A **buffalo race** held on **slushy fields**, celebrating farming traditions.
- **Bullock Cart Races (Maharashtra, Karnataka):** **Bullocks** race on tracks during **festivals** or **rural fairs**.
- **Bulbul Fights (Assam):** **Nightingales** are forced to fight during the **Bhogali Bihu** festival.



- **Buffalo Fights** (Assam, Odisha): **Buffaloes** battle each other during **Bhogali Bihu** and **Dussehra** festivals.
- **Camel Fights** (Haryana, Rajasthan): **Camels** are made to fight at **fairs**.
- **Dhirio (Bull Fights)** (Goa): Traditional **bullfights** during **local fairs**.
- **Polo with Ponies** (Manipur): Traditional **polo** played using **ponies**, raising concerns about **pony welfare**.

Conclusion: The Ongoing Battle Against Animal Cruelty

Despite significant efforts by law enforcement and modern technology, the **practice** of **rooster fights** and other animal-related sports continues to be deeply ingrained in certain parts of India. The **financial stakes** and cultural significance of these events make it a challenging issue to fully eradicate, highlighting the need for more robust enforcement and public awareness to prevent cruelty towards animals.

