DAILY CURRENT AFFAIRS 26-02-2026

Mapping Perspective

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Cuban Island

Syllabus: Prelims Bits - Mapping

Context:

Cuban **security advisers, intelligence operatives and medical personnel** are being **withdrawn from Venezuela** amid strong U.S. pressure to dismantle the Havana–Caracas alliance.

Cuba — Key Geography

Location

- Largest island in the **north-western Caribbean** at the junction of the **Atlantic Ocean, Gulf of Mexico and Caribbean Sea**.
- Maritime neighbours: **USA, Bahamas, Jamaica, Haiti, Mexico, Honduras**.

Surrounding water bodies

- Atlantic Ocean; Caribbean Sea; Gulf of Mexico; Straits of Florida; Cayman Trench

Capital: Havana

Geographical features

- **Relief:** Mostly flat plains with rolling hills.
- **Climate:** Tropical — dry season (Nov–Apr) and wet season (Apr–Nov).

- **Mountains:** Sierra Maestra
- **Major river:**Cauto
- **Lakes/reservoirs:** Laguna de Leche, Zaza Reservoir
- **Natural resources:** Nickel, cobalt, petroleum, fertile land, forests

Key Takeaways

- **Geopolitics:** Cuba–Venezuela alliance weakening under U.S. pressure.
- **Energy security:** External oil dependence as a strategic vulnerability.
- **Soft power:** Cuban medical diplomacy facing global pushback.
- **Regional stability:** Caribbean states concerned about spillover effects.

Lake Baikal

Syllabus:Prelims Bits – Lakes in news

Context:

A **tour bus carrying Chinese tourists broke through the frozen surface** of **Lake Baikal** in Siberia.

Seven bodies were recovered, highlighting the **risks of thinning ice and unsafe winter tourism** on frozen lakes.

About Lake Baikal

Dimension	Details
Location	Southern part of **Eastern Siberia (Russia)** near the **Mongolia border**; lies within the **Baikal Rift Zone** (active continental rift).
Geological Age	**Oldest freshwater lake in the world** (~20–25 million years).
Type of Lake	**Rift valley freshwater lake** with extremely thick sediment accumulation (~7 km).
Depth	**Deepest lake in the world — 1,642 m**.
Rift Characteristics	Deepest continental rift; rift floor lies **8–11 km below surrounding terrain** due to sediments.
Freshwater Volume	**Largest freshwater lake by volume**; contains **~20% of the world's unfrozen surface freshwater**.
Largest by Area?	Not largest (that is **Lake Superior**).
Islands	**~45 islands and islets**; **Olkhon Island** is the largest and culturally important.
Inflow Rivers	**~330 rivers** drain into the lake. Major ones: **Selenga, Barguzin, Upper Angara, Turka, Sarma**.
Outflow River	**Only outlet:Angara River**.
Climate Influence	Lake moderates surrounding harsh continental climate.
Freeze–Thaw Cycle	**Freezes:** January; **Thaws:** May–June; ice thickness may exceed **1 m** (temporary transport routes but risky).
Biodiversity Significance	Known as **"Galápagos of Russia"** due to high **endemism and unique freshwater fauna**.
Unique Species	**Baikal seal (Nerpa)** — world's only **freshwater seal**.
Indigenous Community	**Buryat people** inhabit eastern shores; follow **Tibetan Buddhism** and practice pastoralism.
UNESCO Status	Declared **UNESCO World Heritage Site (1996)**.

Dimension	Details
Major Threats	Pollution, climate change, unregulated tourism, industrial discharge, invasive species.

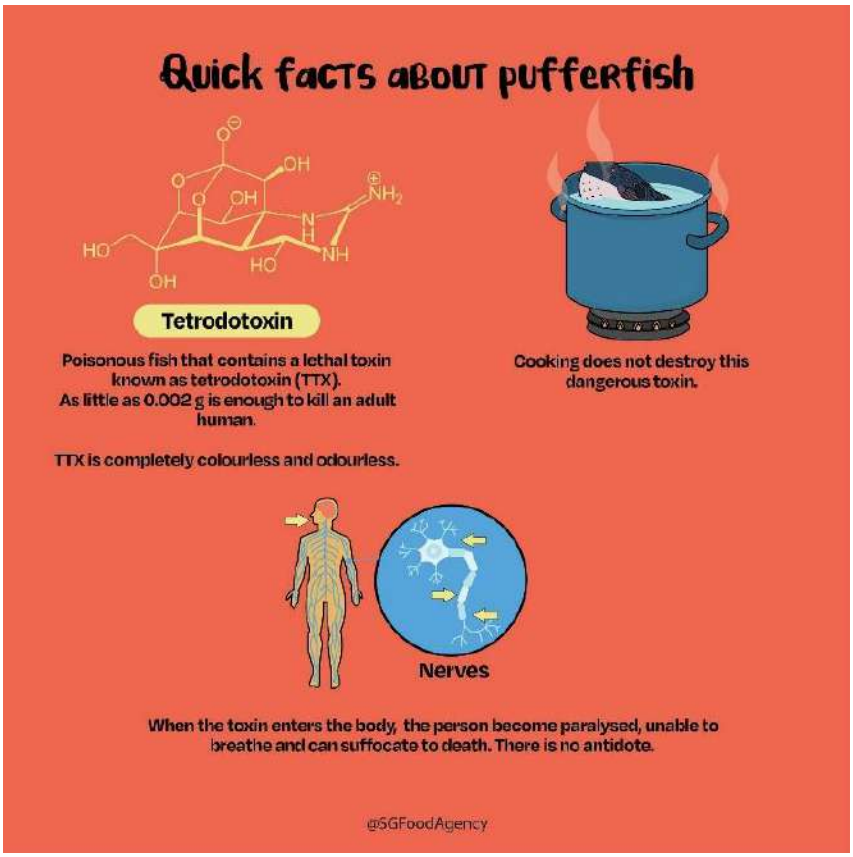
Tetrodotoxin

Syllabus:Prelims Bits – General Science.

Context:

- **Vizhinjam, Kerala:** Several people fell severely ill after consuming seafood at a restaurant.
- **Suspected cause:** Contamination with **Tetrodotoxin (TTX)** — a highly potent marine neurotoxin.

About Tetrodotoxin (TTX)



Basic Characteristics

- **Nature:** Extremely potent **marine neurotoxin**
- **Chemical formula:$C_{11}H_{17}N_3O_8$**
- **Physical properties:**
  - Crystalline, colorless, weakly basic organic compound
  - Darkens above **220°C**
- **Heat stability:** Not destroyed easily by normal cooking → major food safety concern

Natural Occurrence

- Found mainly in **family Tetraodontidae**
- Common organisms:
  - **Puffer fish (Fugu)** — most important source
  - Porcupine fish
  - Ocean sunfish
  - Some **newts and salamanders**
- Concentrated in **liver, ovaries, intestine, and skin**

Toxin is produced by **symbiotic bacteria**, not by the fish itself.

TTX Poisoning

- Occurs due to **improper preparation of toxic fish organs**
- Symptoms appear **10–45 minutes** after ingestion (can be delayed)
- **No specific antidote**
- Management:
  - Supportive care
  - Respiratory support (ventilation)
  - Gastric decontamination if early

India's Trade Strategy in a Multi Polar World

Syllabus: GS-3: Indian Economy – Trade.

Context:

- India is transitioning from a **defensive and cautious trade approach** to a **proactive, integration-oriented strategy**.
- Emphasis on **Free Trade Agreements (FTAs)**, export diversification, and **global supply-chain integration**.
- Trade policy is increasingly linked with **strategic diplomacy and technology partnerships**.

Foreign Trade Policy (FTP) 2023

Objectives

- Target of **$2 trillion exports by 2030** (goods + services).
- Focus on **process re-engineering, digitalization, and ease of doing export business**.
- Promotion of **districts as export hubs** and **MSME export participation**.

Performance

- **Total exports:$825.25 billion** (2025 Year-End Review, Department of Commerce).
- **Growth:6.05% annual increase** despite global slowdown and geopolitical disruptions.

Shift in India's Trade Strategy

Earlier Approach

- Concerns regarding **import surges, trade deficits, and domestic industry protection**.
- Limited enthusiasm toward deep FTAs.

Current Proactive Approach

- Comprehensive FTAs with **advanced and high-consumption economies**.
- FTAs expected to **cover ~71% of India's export basket by 2026**.
- Focus on **value chain integration and standards harmonization**.

Key Trade Agreements

India–EU Free Trade Agreement (2026)

- Creates one of the **largest free trade zones globally**.
- **Tariff reduction/elimination on ~90% of traded goods**.
- Benefits:
  - Greater market access for **pharmaceuticals, textiles, automobiles, and IT services**.
  - Helps India compete with **Vietnam, Bangladesh, and ASEAN exporters**.
  - Boosts **investment and regulatory cooperation**.

India–U.S. Framework Agreement (2026)

- Focus on **reciprocal tariff reduction and supply-chain resilience**.
- Priority sectors:
  - **Semiconductors**
  - **Rare earth minerals**
  - **Critical and emerging technologies**
- Strengthens **technology transfer and strategic economic alignment**.

Strategic Objectives of India's Trade Policy

- **Preferential market access** to high-income consumption markets.
- **Integration into Global Value Chains (GVCs)** to move up the value ladder.
- **Export diversification** beyond traditional sectors.
- **Investment attraction** through predictable trade regimes.
- Use FTAs as tools of **economic diplomacy and geopolitical balancing**.

Broader Economic Significance

- Supports **manufacturing push under Make in India and PLI schemes**.
- Enhances **services exports leadership** (IT, fintech, professional services).
- Strengthens India's role in **Indo-Pacific and Global South trade architecture**.
- Contributes to the **Viksit Bharat 2047 vision**.

Challenges / Concerns

- Risk of **trade deficits with developed partners**.
- Domestic industry concerns regarding **import competition**.
- Need for **standards compliance, logistics reforms, and skilling**.
- Adjustment pressure on **agriculture and MSMEs**.

Way Forward

- Parallel focus on **competitiveness, logistics efficiency, and innovation**.
- Strategic use of **rules of origin and safeguard measures**.
- Strengthening **export credit, trade facilitation, and digital trade frameworks**.

Conclusion

India's proactive trade strategy marks a structural shift toward **deep global economic integration**. By leveraging FTAs, supply-chain partnerships, and export-oriented reforms, India aims to enhance competitiveness, attract investment, and position itself as a **major global economic power aligned with the Viksit Bharat vision**.

Practice Qs:

Q. India has shifted from a cautious trade approach to a proactive FTA-driven strategy. Examine the objectives, benefits, and challenges of this shift. (250 words)

Traditional Knowledge Digital Library

Syllabus: GS-3: Science and Technology - IPR

Context:

- Recently, the **National Institute of Industrial Property (INPI), Brazil** and the **Council of Scientific and Industrial Research (CSIR), India** signed a **cooperation arrangement** granting INPI access to the **Traditional Knowledge Digital Library (TKDL)**.
- With Brazil's inclusion, **18 patent offices globally** now have access to TKDL under **Non-Disclosure Agreements (NDAs)**.
- The move strengthens **international efforts to prevent biopiracy and wrongful patenting of Indian traditional knowledge**.

About Traditional Knowledge Digital Library (TKDL)

Establishment

- Launched in **2001** by the **Government of India**.
- Developed jointly by:
  - **Council of Scientific and Industrial Research (CSIR)**
  - **Ministry of AYUSH**

Core Objective

- **Prevent erroneous patent grants** based on Indian traditional knowledge.
- **Protect traditional medicinal heritage** from **biopiracy and misappropriation**.
- Provide **prior art evidence** to patent examiners worldwide.

Key Features

Vast Knowledge Repository

- Contains **5.2 lakh+ formulations and practices**.
- Derived from classical texts of:
  - Ayurveda; Unani; Siddha; Sowa Rigpa; Yoga

Structured Scientific Conversion

- Traditional knowledge is:Digitized; Codified; Linked with **modern scientific terminology**
- Uses **Traditional Knowledge Resource Classification (TKRC)** to align with **International Patent Classification (IPC)**.

Multilingual Database

- Available in **five international languages**:English; German; French; Japanese; Spanish

Controlled Access Mechanism

- Access provided only to patent offices through **Non-Disclosure Agreements (NDAs)**.
- Ensures **defensive protection** without commercial exploitation.

Significance

Combating Biopiracy

- Prevented patents on:Turmeric wound healing; Neem pesticide properties; Basmati rice claims

Strengthening India's IPR Regime

- Acts as **prior art database** for global patent examiners.
- Reduces litigation costs and patent disputes.

Global Benchmark

- Widely regarded as a **model for defensive protection of traditional knowledge**.
- Encourages other countries to digitize indigenous knowledge systems.

Soft Power & Knowledge Diplomacy

- Expanding access to foreign patent offices enhances **India's scientific diplomacy** and **traditional medicine recognition**.

Challenges

- Need for **continuous documentation** of oral and community knowledge.
- Balancing **accessibility with community rights and benefit sharing**.
- Risk of **commercial exploitation without equitable benefit sharing**.

Way Forward

- Integration with **digital biodiversity registers** and **community knowledge databases**.
- Stronger linkage with **WIPO negotiations on traditional knowledge protection**.
- Expansion of global collaborations and inclusion of more patent offices.

Practice Qs:

Q. "The Traditional Knowledge Digital Library (TKDL) represents India's innovative approach to safeguarding indigenous knowledge in the global intellectual property regime."Discuss the objectives, significance, and limitations of TKDL in preventing biopiracy and protecting traditional knowledge. (250 words)