

**1. Consider the following statements regarding the Biological and Toxin Weapons Convention (BTWC)**

1. It was the first multilateral treaty categorically banning a class of weapon
2. Under BTWC, there is no formal verification regime to monitor compliance
3. India has both signed and ratified the convention
4. The treaty prohibits the development of biological agents including those that have been justified for protective or peaceful use

**Which of the statements given above is/are correct?**

- a) 3 only
- b) 2, 3 and 4 only
- c) 1, 2 and 3 only
- d) 1 and 4 only

**Ans: C**

**Explanation**

- **Statement 1 is correct:** The Biological and Toxin Weapons Convention (BTWC) was the first multilateral treaty categorically banning a class of weapon.
- **Statement 4 is incorrect:** The treaty prohibits the development, stockpile, production, or transfer of biological agents and toxins of "types and quantities" that have no justification for protective or peaceful use.
- Furthermore, the treaty bans the development of weapons, equipment, or delivery systems to disseminate such agents or toxins.
- The convention stipulates that **states shall cooperate bilaterally or multilaterally** to solve compliance issues.

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- There is a review conference every five years to **review the convention's implementation**, and establish confidence-building measures.

**Verification**

- **Statement 2 is correct:** There is **no formal verification regime to monitor compliance**. Member States are **encouraged to abide by numerous confidence-building measures (CBMs)** prescribed by State Parties at various review conferences.
- These include: **domestic implementation measures**, if considered necessary; consultation and co-operation among parties; lodging of complaints with the UN Security Council; and incentives, such as assistance to victims.
- Since 1991, there have been efforts to negotiate a verification protocol to strengthen the BTWC's lack of provisions for an international mechanism to monitor compliance. Difficulties in creating a verification regime for the BTWC include: any nation with a developed pharmaceutical industry has the potential to make biological weapons; the **emergence of non-state actors makes it difficult to develop effective verification measures**
- **Number of State Parties: 183**
- **Statement 3 is correct: India ratified and pledged to abide by its obligations in 2015**
- On August 2019, Tanzania became the 183rd State Party to the treaty
- ✓ The **Covid-19 pandemic has exposed the vulnerability of several world powers** in the event of use of biological weapons against them by rogue states and terrorist groups.
- ✓ Some intelligence agencies initially proclaimed that **coronavirus occurred naturally but later on, they claimed that the pandemic might have begun from the Wuhan lab in China** after the researchers were probably able to figure out how bat coronaviruses could mutate to attack humans
- ✓ However, there is no proof that the pandemic virus was engineered or manipulated, yet.

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- ✓ In the Indian context, with the existence of **hostile neighbours like Pakistan and China**, the threat of biological warfare becomes important and cannot be ruled out entirely

<https://www.nti.org/learn/treaties-and-regimes/convention-prohibition-development-production-and-stockpiling-bacteriological-biological-and-toxin-weapons-btwc/>

**2. The Bay of Bengal Boundary Layer Experiment (BoBBLE) was jointly undertaken by India and the United Kingdom for which of the following purposes?**

- a) Harnessing Tidal energy
- b) To analyse the impact of ocean acidification on marine ecosystem
- c) To restore mangroves along the eastern coast of India
- d) Monsoon prediction

**Ans: D**

**Explanation**

- The Bay of Bengal (BoB) plays a fundamental role in **controlling the weather systems** that make up the **South Asian summer monsoon system**.
- In particular, the southern BoB has **cooler sea surface temperatures (SST)** that influence ocean-atmosphere interaction and impact the monsoon.
- To examine the **impact of these features on the monsoon**, the **BoB Boundary Layer Experiment (BoBBLE) was jointly undertaken by India and the United Kingdom** during June–July 2016.
- Physical and biogeochemical observations were made using a conductivity-temperature-depth (CTD) profiler, five ocean gliders, an Oceanscience Underway CTD (uCTD), a vertical microstructure profiler (VMP), two acoustic Doppler current profilers (ADCPs), Argo floats, drifting buoys, meteorological sensors, and upper-air radiosonde balloons

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- ✓ Recently, a team from **Indian Institute of Science in Bengaluru** and UK based University of East Anglia have created a **blueprint for accurate prediction of monsoon**, tropical cyclones and other weather related forecast
- ✓ The Bay of Bengal Boundary Layer Experiment is a project funded by **Union Ministry of Earth Sciences** and the Natural Environment Research Council of UK.

<https://www.researchgate.net/publication/323057929> BoBBLE Bay of Bengal Boundary Layer Experiment Ocean-atmosphere interaction and its impact on the South Asian monsoon

**3. With reference to Bru or Reang community, consider the following statements**

1. They are indigenous to Northeast India, living mostly in Tripura, Mizoram and Assam
2. They are recognised as a Particularly Vulnerable Tribal Group (PVTG) only in the State of Tripura

**Which of the statements given above is/are correct?**

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Ans: C**

**Explanation**

- **Statement 1 is correct:** Bru or Reang is a **community indigenous to Northeast India**, living mostly in Tripura, Mizoram and Assam
- Also known as Reangs in the state, they are **ethnically different from the Mizos**, with their own **distinct language and dialect** and form one of the 21 scheduled tribes of Tripura

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- While Mizoram has as many as 40,000 Brus living in the state, in Tripura, their numbers stand at approximately 32,000, spread across six refugee camps in the state
- The first signs of conflict between the two communities emerged in 1995 when **Mizo organisations — the Young Mizo Association and the Mizo Students' Association —** demanded that Brus be left out of the state's electoral rolls as they were not an indigenous tribe
- The Brus retaliated by forming an **armed organisation, Bru National Liberation Front,** and a political body, Bru National Union.
- The two demanded more political autonomy for Mizoram's Brus and a Bru Autonomous District Council under the Sixth Schedule of the Constitution.
- In 1997, **following ethnic tension over an incident in Mizoram,** around 5,000 families comprising over 30,000 Bru tribals were forced to flee the state and seek shelter in Tripura, where they were housed in temporary camps at Kanchanpur
- **Displaced Bru tribals from Mizoram,** living as refugees in Tripura since 1997, were allowed to permanently settle in Tripura
- A recent agreement, **allowing 30,000 Bru tribals to permanently settle in Tripura,** took 20 years and nine attempts in the making, and was signed between the Centre, the state governments of Tripura and Mizoram, and Bru-Reang representatives in the national capital
- **Statement 2 is correct:** In Tripura, they are **recognised as a Particularly Vulnerable Tribal Group (PVTG). Refer to the below list of PVTG**  
<https://tribal.nic.in/DivisionsFiles/ListofPVTGs191212.pdf>
- ✓ In the middle of the **Covid-19 lockdown,** two community-specific groups have renewed their **opposition to the permanent settlement of Bru refugees** from Mizoram in Tripura
- ✓ The two groups namely, Nagarik Suraksha Mancha (mostly representing Bengali people displaced from erstwhile East Pakistan post-partition in 1947) and the Mizo Convention

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have submitted a **memorandum protesting against the proposed settlement** of the displaced Brus in Tripura.

**Particularly Vulnerable Tribal Groups**

- In India, tribal population makes up for 8.6% of the total population.
- Particularly Vulnerable Tribal Groups (PVTGs) are **more vulnerable among the tribal groups**.
- In 1973, the **Dhebar Commission** created Primitive Tribal Groups (PTGs) as a separate category, who are less developed among the tribal groups. In 2006, the Government of India renamed the PTGs as PVTGs.
- PVTGs have some basic characteristics - they are mostly **homogenous, with a small population**, relatively **physically isolated**, absence of written language, relatively simple technology and a slower rate of change etc
- Among the **75 listed PVTG's** the **highest number are found in Odisha**

<https://www.livemint.com/news/india/who-are-the-bru-refugees-11579233818774.html>

4. It is a tiger reserve in Rajasthan. It comprises scrub-thorn arid forests, dry deciduous forests, grasslands, and rocky hills. It was given the status of a tiger reserve making it a part of India's Project Tiger in 1978. It is the first tiger reserve in the world to have successfully relocated tigers. It is a part of the Aravalli Range and the Kathiawar-Gir dry deciduous forests ecoregion.

The above description refers to?

- a) Mukundara Hills Tiger Reserve
- b) Sariska Tiger Reserve
- c) Ranthambore Tiger Reserve
- d) Bandhavgarh Tiger Reserve

**Ans: B**

**Explanation**

- Sariska Tiger Reserve is a **tiger reserve in Alwar district, Rajasthan**. It stretches over an area of 881 km<sup>2</sup> **comprising scrub-thorn arid forests, dry deciduous forests, grasslands**, and rocky hills.
- This area was a **hunting preserve of the Alwar state** and was declared a wildlife reserve in 1955. It was given the **status of a tiger reserve making it a part of India's Project Tiger in 1978**. The wildlife sanctuary was declared a national park in 1990, with a total area of about 273.8 km<sup>2</sup>.
- It is the **first tiger reserve in the world to have successfully relocated tigers**. It is an **important biodiversity area** in the Northern Aravalli leopard and wildlife corridor
- It is a **part of the Aravalli Range** and the Kathiawar-Gir dry deciduous forests ecoregion
- It is **rich in mineral resources**, such as copper. In spite of the Supreme Court's 1991 ban on mining in the area, marble mining continues to threaten the environment

**5. Recently, the Bank of Schemes, Ideas, Innovation and Research portal was launched by Government of India. It was launched primarily to aid which of the following?**

- a) Higher education institutions
- b) Micro Small and Medium Enterprises
- c) Micro finance Institutions (MFI)
- d) Bio-pharma sector

**Ans: B**

**Explanation**

**Bank of Schemes, Ideas, Innovation and Research portal on MSMEs**

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- The **Portal (http://ideas.msme.gov.in/)** gives access to all Schemes of Union, State and UT Governments.
  - It has the provision for **uploading Ideas, Innovations & Researches** in the sector.
  - The portal has unique features of not only **crowdsourcing of Ideas**, but also evaluation and rating the ideas by crowd sourcing.
  - It can also facilitate **inflow of venture capital**, foreign collaboration etc.
  - The portal enables **category-wise classification and analysis of information** and the achievements which may be published so that others learn or take lessons from successful experiences.
  - The portal will prove to be of **great transformational significance to the MSMEs** in particular and the economy in general
- ✓ Recently, **the Union Minister of Micro Small and Medium Enterprises** launched the Bank of Schemes, Ideas, Innovation and Research portal on MSMEs

<https://pib.gov.in/PressReleasePage.aspx?PRID=1619559>