2. Biological Weapons Convention- International Relation

Bioterrorism a serious threat, world not ready- Jaishankar. Marking the 50th anniversary of the Biological Weapons Convention (BWC), India has cautioned that the world is unprepared for bioterrorism due to significant institutional gaps and the absence of a verification mechanism. To address these vulnerabilities and the risks posed by dual-use technologies, India has proposed a National Implementation Framework to enhance global and domestic biosecurity preparedness.

Current Status

Event- The world recently marked the 50th Anniversary of the Biological Weapons Convention (BWC).
India's Stance- India's External Affairs Minister (EAM) cautioned that the international community is "not yet adequately prepared" to handle the threat of bioterrorism. The EAM highlighted significant institutional and structural gaps in the current global framework.

Understanding Bioterrorism

Definition- It refers to the deliberate release of biological agents (bacteria, viruses, or toxins) to cause illness or death among humans, animals, or plants.
NDMA Classification- The National Disaster Management Authority (NDMA) classifies bioterrorism as a Biological Disaster. Distinction- It is distinct from natural outbreaks due to its deliberate intent.
Potential Agents- Pathogens like Bacillus anthracis (anthrax). Viruses like Variola major (smallpox). Toxins like botulinum.
Rising Threat- The risk has escalated due to advances in biotechnology and synthetic biology. While these fields offer benefits, they pose a high risk of misuse (dual-use dilemma).

Overview of Biological Weapons Convention (BWC)

Status- It is the key international treaty prohibiting biological weapons.
Milestone- It was the first multilateral disarmament treaty to ban an entire category of weapons of mass destruction (WMD).
Timeline- Established and entered into force on March 26, 1975.
Core Prohibitions- It bans the development, production, acquisition, transfer, stockpiling, and use of biological and toxin weapons.
Administration- The United Nations Office for Disarmament Affairs (UNODA) acts as the treaty's depositary and provides administrative support.
Membership- Total 189 states, including India. Several other nations remain as signatories.
Review Mechanism- Review Conferences are held every five years to assess implementation and address emerging biosecurity threats.

Concerns & Issues Surrounding BWC

Lack of Basic Institutional Structures- No Compliance System**-** The BWC lacks a formal method to ensure states adhere to rules.
No Permanent Technical Body- Unlike other treaties, it does not have a dedicated scientific wing.
No Tracking Mechanism- There is no system in place to effectively track scientific developments. No Verification Mechanism
Absence of Regime- The BWC lacks a formal verification regime, unlike the Chemical Weapons Convention (CWC).
Enforcement Challenges- This makes monitoring compliance and enforcing the treaty extremely difficult.

Weak Implementation Support Unit (ISU)

Resource Scarcity- The ISU remains significantly underfunded and understaffed.
Political Inertia- The lack of resources reflects a broader lack of global political will to strengthen the body.

Growing Complexity in Dual-Use Biotechnology

Blurring Lines- Rapid advances in synthetic biology, genome editing, and AI-driven bioengineering have blurred the lines between peaceful research and military application.
50th Anniversary Context- These technological challenges are central to the discussions during the

50th anniversary.

Issues with Transparency and Confidence-Building

Low Reporting- While Confidence-Building Measures (CBMs) require states to submit data on facilities and research, compliance is uneven.

Data Gap- Less than 60% of states regularly submit the required reports.

Geopolitical Dynamics

Great Power Rivalry- Consensus on verification protocols has been hampered since 2001 due to tensions between major powers (US, Russia, China).

Global South Push- Newer actors like India, Indonesia, and Brazil are pushing for more inclusive governance that connects disarmament to development agendas.

India's Domestic Policy Framework

India has implemented specific preparedness frameworks to handle biological threats-

Surveillance- The Integrated Disease Surveillance Programme (IDSP) monitors disease trends.

Guidelines- The NDMA released Biological Disaster Management Guidelines in 2008.

Response Mechanism- The National Centre for Disease Control (NCDC**)** is designated for rapid response and biosurveillance.

Objective- These initiatives aim to detect biological incidents swiftly to ensure public health resilience.

National Implementation Framework (Proposed by India)

India has proposed a comprehensive National Implementation Framework to enhance preparedness at both domestic and global levels. This framework covers-

High-Risk Agents- Strict monitoring and control of dangerous pathogens.

Dual-Use Oversight- Monitoring research that can be used for both beneficial and harmful purposes.

Reporting- Robust domestic reporting mechanisms.

Incident Management- Standard protocols for managing biological incidents.

Future Directions & Way Ahead

Scientific Advisory Board- Establishing a board under BWC to monitor emerging biotechnologies (Genetic engineering, AI).

Verification Protocol- Developing a formal verification protocol supported by international biosecurity standards.

Transparency- Enhancing peer review mechanisms among member states to build trust.

Education- Promoting capacity building and ethics education among scientists to prevent the misuse of biological research.

Source- https- //www.thehindu.com/news/national/need-framework-to-deal-with-challenge-of-biological-weapons-jaishankar/article70344571.ece