

## SIPRI ANNUAL REPORT 2025

**NEWS: The Stockholm International Peace Research Institute (SIPRI) launched its annual assessment of the state of armaments, disarmament and international security for 2025.**

### WHAT'S IN THE NEWS?

#### Global Nuclear Warhead Estimates (As of January 2025)

- The **total estimated number of nuclear warheads worldwide** stands at **12,241**, reflecting a continued global reliance on nuclear deterrence.
- Out of this, **9,614 warheads** are part of **military stockpiles**—either **operationally available or held in reserve** for potential use.
- Approximately **3,912 nuclear warheads** are **deployed**, meaning they are **mounted on missiles or located on bases** with operational forces ready for use.
- Around **2,100 of these deployed warheads** are maintained on **high operational alert**, primarily by the **United States and Russia**, enhancing rapid launch capabilities and raising escalation risks.

#### Country-Specific Nuclear Warhead Holdings (2025 Estimates)

- **India** possesses an estimated **180 nuclear warheads**, all in storage, with **ongoing development of advanced delivery systems**.
- **Pakistan** holds around **170 nuclear warheads**, and is actively working on **expanding its fissile material stockpile and modernising delivery platforms**.
- **China** has significantly expanded its nuclear arsenal to **600 warheads**, with **24 deployed warheads** placed either on missiles or stationed at bases with operational units.
- **Russia and the United States** together account for **about 90% of the world's nuclear weapons**, highlighting their dominant role in global strategic stability.

#### Expansion and Modernisation of Nuclear Forces (2024–2025)

- Nearly **all nine nuclear-armed states**—the U.S., Russia, the U.K., France, China, India, Pakistan, North Korea, and Israel—are undertaking **intensive nuclear modernisation efforts**.
- **India** modestly expanded its nuclear arsenal in 2024 and advanced the **development of new delivery systems** with **longer range, better survivability, and enhanced precision**.
- **Pakistan** focused on both **accumulating fissile material** and **diversifying its nuclear delivery mechanisms**, suggesting a strategic intent to maintain credible deterrence.
- **China** is accelerating the pace of nuclear expansion, **adding approximately 100 new warheads annually since 2023**. If the current pace continues, China may possess **1,000 nuclear warheads within 7–8 years**.

- Modernisation includes the development of technologies such as **MIRVs (Multiple Independently Targetable Reentry Vehicles)**, **canisterised missiles**, and **AI-based command and control systems**, which enhance strike capabilities and survivability.

## **Military Expenditure and Arms Transfers (2024 Trends)**

### **a) Global Military Spending**

- Total global military spending reached **\$2.7 trillion in 2024**, marking a **9.4% increase** compared to the previous year.
- The **United States remained the largest military spender**, allocating **\$997 billion**, followed by **China at \$314 billion**, reflecting strategic competition and regional dominance efforts.

### **b) Major Arms Importers (2020–2024)**

- The top arms-importing countries included:
  - **Ukraine** (due to ongoing war with Russia)
  - **India**
  - **Qatar**
  - **Saudi Arabia**
  - **Pakistan**
- These trends show a **high regional demand for conventional arms**, often driven by geopolitical tensions and regional rivalries.

### **c) Major Arms Exporters**

- **United States** remained the largest arms exporter, contributing **43% of global exports**.
- **France** followed with **9.6%**, while **Russia** accounted for **7.8%**, indicating shifting market shares and impact of sanctions on Russian defense exports.

## **Rising Concerns and Strategic Outlook**

### **a) Weakening of Global Arms Control Frameworks**

- The **global arms control regime is under stress**, with **no nuclear-armed state demonstrating full commitment to disarmament**.
- The period of global nuclear arsenal reduction may be **coming to an end**, as major powers reinvest in **nuclear modernisation** rather than reductions.

### **b) China's Strategic Expansion**

- China's **steady and structured increase in nuclear capabilities** is reshaping global nuclear dynamics.
- Its growing stockpile, advanced delivery platforms, and potential shift in nuclear posture are **raising concerns among regional and global rivals**.

### **c) USA-Russia Strategic Arms Balance**

- The **bilateral New START Treaty**, signed in 2010 to cap strategic nuclear arsenals, is set to **expire in February 2026**.

- If no successor agreement is negotiated, the **number of deployed warheads** on both sides is expected to **rise**, potentially fuelling a new arms race.

#### d) Potential Emergence of New Nuclear States

- Rising geopolitical tensions in **East Asia, the Middle East, and parts of Europe** are reviving national debates around **nuclear weapon acquisition**.
- The absence of robust non-proliferation enforcement could open doors for **new states to develop nuclear weapons**, increasing global instability.

### India's Status in SIPRI Yearbook 2025

#### a) Warhead Count and Posture

- India possesses an estimated **180 stored nuclear warheads** as of **January 2025**.
- These warheads are **not deployed** but stored, with growing indications of a shift in India's deployment posture.

#### b) Modernization Efforts

- India is actively **developing canisterised ballistic missiles**, which are stored and launched from sealed containers, allowing for **quick launch and higher survivability**.
- Some of these systems are being **equipped with multiple independently targetable reentry vehicles (MIRVs)**, enhancing India's second-strike capability.

#### c) Nuclear Triad Capability

- India now maintains a **fully functional nuclear triad**, which includes:
  - **Land-based missiles** (e.g., Agni series)
  - **Air-delivered nuclear weapons** (e.g., aircraft like Mirage 2000 and Rafale)
  - **Submarine-based deterrence** via **nuclear-powered ballistic missile submarines (SSBNs)** like INS Arihant.

#### d) Strategic Posture Shift

- There are growing signs that India may be **moving away from a de-alerted posture**, where warheads are kept separate from launchers.
- A **possible transition toward peacetime mating of warheads with launchers** reflects greater readiness, but it also increases **crisis-time escalation risks**.

### Pakistan's Nuclear Capability

#### a) Current Arsenal

- As of January 2025, Pakistan holds an estimated **170 nuclear warheads**, slightly fewer than India.

#### b) Trends in Expansion

- Pakistan is **increasing fissile material production**, suggesting a strategic intent to **expand its arsenal** over the coming years.
- The country is also **developing new delivery systems**, including short-range and tactical nuclear weapons.

### c) Strategic Focus

- Pakistan's nuclear doctrine remains **India-centric**, with an emphasis on “**full spectrum deterrence**”.
- This includes a significant focus on **short-range tactical nuclear weapons** aimed at deterring India's conventional military superiority.

## China's Expanding Nuclear Arsenal

### a) Nuclear Inventory

- As of January 2025, China has an estimated **600 nuclear warheads**, marking rapid growth in recent years.
- China has been **adding approximately 100 warheads annually since 2023**, reflecting a long-term expansion strategy.

### b) Infrastructure Development

- China has constructed around **350 new intercontinental ballistic missile (ICBM) silos**, primarily in **remote desert and mountainous regions**.
- These silos represent a **major increase in launch capability and survivability**.

### c) Posture Change

- There are signs that China is now **placing warheads on missiles during peacetime**, a major shift from its traditional **de-alerted, minimal deterrence posture**.

## Global Nuclear Force Trends (2025 Overview)

### a) Global Warhead Inventory

- The estimated **total number of nuclear warheads** globally is **12,241**.
- Around **9,614 warheads are in military stockpiles**, meaning they are either deployed or reserved for potential military use.

### b) Top Nuclear Powers

- **Russia (5,459 warheads) and the United States (5,177)** together **hold over 90% of the world's nuclear weapons**, reinforcing their centrality in nuclear diplomacy.

### c) Operational Readiness

- Approximately **2,100 warheads are maintained at high operational alert**, meaning they can be **launched within minutes**, increasing the risk of rapid escalation.

### d) Modernisation Across Nuclear States

- All **nine nuclear-armed countries** (USA, Russia, UK, France, China, India, Pakistan, North Korea, Israel) are engaged in **modernising and expanding their arsenals**.
- This includes:
  - **Upgraded delivery systems**
  - **Advanced warhead designs**
  - **Use of emerging technologies** like AI, quantum computing, and space-based assets.

## **Breakdown in Arms Control Frameworks**

### **a) Expiration of New START Treaty**

- The New START Treaty, the **last remaining strategic arms control agreement** between the USA and Russia, is scheduled to **expire in 2026**.
- With no clear successor in place, the **arms race may re-escalate**, and **warhead deployment may increase**.

### **b) Lack of Global Agreements**

- The **global nuclear arms control regime is fragmenting**, with **no multilateral treaties currently limiting stockpiles or modernisation**.
- The absence of regulation increases the **risk of unchecked growth** and **technological arms racing**.

## **Rising Risks of Nuclear Conflict in 2025**

### **a) Regional Flashpoints**

- A **military standoff between India and Pakistan in early 2025**, referred to as **Operation Sindoor**, involved strikes on **nuclear-linked military infrastructure**.
- This incident raised alarms about the **risk of nuclear escalation from conventional skirmishes**.

### **b) Technology as a Risk Multiplier**

- Integration of **artificial intelligence, cyberwarfare, satellite surveillance, and quantum systems** into military command-and-control systems has made **deterrence more fragile and less predictable**.
- These tools compress **decision-making timelines**, increasing chances of **miscalculation or accidental launch**.

### **c) Disinformation and Strategic Stability**

- The use of **fake narratives and propaganda during conflicts** can **distort threat perceptions**, pushing nations to act on **false or manipulated intelligence**.
- **Information warfare** thus acts as a trigger for **strategic misjudgments and premature escalation**.

## **Policy Implications and Strategic Path for India**

### **a) Balanced Posture**

- India must pursue **nuclear modernisation with caution**, ensuring it does not undermine its core principle of **credible minimum deterrence** or **strategic restraint**.

### **b) Reviving Dialogue and Risk Reduction**

- India should actively work to **revive arms control discussions** at bilateral and multilateral forums, especially in **South Asia**, to reduce the risk of **miscalculation and misunderstanding**.

### **c) Strengthening Strategic Autonomy**

- Investing in **indigenous technological innovation** in areas like **missile systems, surveillance, and AI** is key to preserving **autonomy in national security**.

- This includes enhancing India's capability for **secure second-strike and early warning systems**.

#### d) Global Leadership in Disarmament

- As a responsible nuclear power, India should **engage constructively in global disarmament, non-proliferation, and arms control initiatives**.
- By advocating for **universal, non-discriminatory nuclear disarmament**, India can bolster its image as a **moral and pragmatic global leader**.

#### About SIPRI (Stockholm International Peace Research Institute)

- SIPRI is an **independent international institute** based in **Stockholm, Sweden**, working on issues of **conflict, armaments, arms control, and disarmament**.
- It was **founded in 1966** by the Swedish Parliament to promote **peaceful conflict resolution** through **reliable and publicly available data and research**.
- SIPRI's research is grounded in **open-source information** and is used by **governments, international organisations, civil society, and media**.
- It receives a significant part of its funding from the **Swedish Government**, but also partners with **other organisations and foundations** to carry out specialised studies.

Source: <https://www.thehindu.com/news/national/india-maintains-nuclear-edge-over-pakistan-with-more-warheads-next-gen-canisterised-mirv-capable-missiles-sipri-report/article69703913.ece>