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EDITORIAL OF THE DAY-15.06.2026

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1. The hidden history of the Thai-Bharat connection (TH)

Paper I: Modern Indian History / Indian Culture

Topic: The Freedom Struggle — its various stages and important contributors/contributions from different parts of the country; Modern Indian history from about the middle of the eighteenth century until the present — significant events, personalities, issues.

Sub-Topic: Transnational Dimensions of the Indian National Movement, the Indian Independence League (IIL), the Bangkok Conference of 1942, and the Geopolitical Foundations of the Indian National Army (INA).

1. Introduction

1. **The Overlooked Anniversary:** June 15, 2026, marks the 84th anniversary of the historic Bangkok Conference (held June 15–23, 1942), a pivotal meeting that directly led to the birth of the Indian National Army (INA).
2. **Thailand's Strategic Role:** During the Second World War, Thailand served as a neutral, strategic beacon and safe sanctuary for Indian revolutionaries fleeing British colonial authorities.
3. **Institutional Evolution:** The Thai-Bharat Cultural Lodge (TBCL) evolved from a modest center for intellectual exchange into a crucial political and infrastructure cornerstone for the Indian independence movement in Southeast Asia.

2. Cultural Foundations and Early Alliance (1927–1939)

1. **The Tagore-Siam Dialogue:** The roots of the transnational alliance were planted in 1927 during Gurudev Rabindranath Tagore's historic visit to Siam (now Thailand), where he met King Prajadhipok (Rama VII).
2. **Shared Civilizational Links:** Their interactions focused on ancient, deep-rooted links in philosophy, religion, and epic narratives like the Indian *Ramayana* and the Thai *Ramakien*.
3. **The Arrival of Swami Satyananda Puri:** Inspired by Tagore's pan-Asian vision, Prafulla Kumar Sen (a brilliant Bengali scholar from the University of Calcutta and Visva-Bharati University) arrived in Bangkok in 1932.
4. **Academic and Cultural Integration:** Sen mastered the Thai language in six months, became a professor at Chulalongkorn University, and founded the *Dharam Ashram* in 1939 as a cultural hub for the growing Indian diaspora.

3. Wartime Politicization and Revolutionary Networks (1940–1941)

1. **Birth of the TBCL:** In December 1940, the Dharam Ashram was formally transformed into the Thai-Bharat Cultural Lodge (TBCL).
2. **Defiance Against the Raj:** The immediate hoisting of the Indian Tricolour at the Lodge served as a bold political statement that drew formal diplomatic protests from the British Ambassador.
3. **Transition to a Political Base:** As the Second World War advanced into Southeast Asia in late 1941, the advancing Japanese military forces turned the TBCL from a cultural school into an active operational hub for nationalists.
4. **The Ghadar Connection:** Sardar Giani Pritam Singh, a Sikh missionary and veteran of the radical Ghadar Party, used local gurdwaras and the TBCL to preach anti-colonial ideals to the diaspora.
5. **The F-Kikan Link:** Pritam Singh established vital, covert intelligence links with Major Iwaichi Fujiwara, the head of the specialized Japanese intelligence unit known as *F-Kikan*.
6. **Founding of the Indian National Council:** In December 1941, nationalists associated with the TBCL founded the Indian National Council (INC) at the Silpakorn Theatre in Bangkok, electing Swami Satyananda Puri as President and Debnath Das as Secretary.
7. **Bridging the Movement:** This Council coordinated the anti-colonial efforts in the region, bridging civilian political aspirations with the military mobilization of the Indian Independence League (IIL).

4. The 1942 Bangkok Conference: Blueprint for the INA

1. **The Diplomatic Turning Point:** The historic Bangkok Conference convened at the Silpakorn Theatre between June 15 and June 23, 1942, bringing together over a hundred delegates representing Indian diaspora communities and freedom fighters from Burma, Malaya, and Singapore.
2. **Consolidation Under the IIL:** The conference successfully unified separate nationalist factions under a structured political and military framework, establishing the Indian Independence League (IIL) as the central organization for expatriate Indians.
3. **The 34-Point Resolution:** The delegates adopted a comprehensive 34-point resolution that served as the official organizational blueprint for the INA.
4. **Ensuring Military Agency:** The resolution explicitly mandated that the INA would consist of civilian volunteers and former Prisoners of War (POWs) under the direct supervision of the IIL—not the Japanese military.
5. **Demanding Sovereign Recognition:** The conference urged Japan to formally recognize India as an independent nation and acknowledge the IIL as its sole legitimate representative, a strategic move to preserve Indian agency despite its dependence on Axis logistics.

5. Tragedy, Netaji's Leadership, and Total Mobilization (1943–1945)

1. **The Leadership Vacuum:** In March 1942, a fatal plane crash killed Swami Satyananda Puri and Sardar Giani Pritam Singh while they were traveling to Tokyo to secure formal commitments for the movement.
2. **The Arrival of Netaji:** Netaji Subhas Chandra Bose's arrival in 1943 provided the unified, charismatic military leadership needed to transition the movement from decentralized regional councils into a disciplined fighting front.
3. **Total Mobilization Strategy:** Netaji assumed absolute command of the IIL and the INA, using the TBCL's established diaspora networks to launch a mass-mobilization campaign that drew in thousands of civilian volunteers.

4. **High-Stakes Diplomacy:** Under Bose, the relationship with the Japanese military transitioned into a high-stakes diplomatic partnership aimed at gaining full international recognition for the Provisional Government of Free India.
5. **The Civilian Cover:** Throughout the front-line military march toward the Indian border, the TBCL remained a vital institutional bridge, providing essential civilian and cultural cover for clandestine anti-colonial activities.

6. Post-War Survival and Modern Archival Legacy

1. **Allied Suppression:** Following the Allied victory in 1945, the occupying forces banned the TBCL and imprisoned its prominent leaders.
2. **The 1946 Revival:** Demonstrating the strength of its deep-rooted cultural and social networks, the Lodge survived the postwar leadership vacuum and was successfully re-established in 1946 through the efforts of Pandit Raghunath Sharma.
3. **A Living Archive:** Today, the TBCL stands as the only surviving institution from this revolutionary era. It functions as a living archive and monument, housing a rare collection of texts, historical photographs, and documents managed by descendants of the historical diaspora, preserving the memory of the global anti-colonial movement.

Source: <https://www.thehindu.com/opinion/lead/the-hidden-history-of-the-thai-bharat-connection/article71101789.ece>

Question

"The institutionalization of the Indian national movement in Southeast Asia demonstrated that cultural and civilizational linkages can serve as potent vehicles for transnational geopolitical mobilization. Elucidate this statement with particular reference to the role of the Thai-Bharat Cultural Lodge (TBCL) in the genesis of the Indian National Army (INA)." (250 Words, 15 Marks)

1. Introduction

The Indian national movement was not confined strictly to the subcontinental landmass; it possessed deep transnational dimensions. In Southeast Asia, particularly in Thailand, the freedom struggle successfully leveraged ancient civilizational and cultural ties to build an active political and military base. The evolution of the Thai-Bharat Cultural Lodge (TBCL) from an intellectual sanctuary into a key organizational pillar for the Indian National Army (INA) illustrates how cultural networks can transform into platforms for armed anti-colonial resistance.

2. Cultural Anchors and the Transition to Political Mobilization

1. **Civilizational Foundation:** The movement drew initial inspiration from the shared religious, philosophical, and literary histories of India and Thailand, highlighted by Rabindranath Tagore's 1927 visit to Siam. This common heritage enabled Indian revolutionaries to operate in a welcoming and supportive environment.
2. **Building a Diaspora Hub:** Founded by Swami Satyananda Puri, the *Dharam Ashram*—later reorganized as the TBCL in 1940—served as a crucial anchor for the Indian diaspora in Bangkok.
3. **Defying Colonial Authority:** The simple act of hoisting the Indian Tricolour at the Lodge signaled the arrival of a highly organized independence movement in Thailand, successfully resisting diplomatic protests from the British government.

3. Activating Revolutionary Networks and the F-Kikan Link

1. **The Ghadar Factor:** Radical Ghadar Party veterans, such as Sardar Giani Pritam Singh, utilized local gurdwaras and the TBCL to spread anti-colonial ideals and unify the local diaspora.

2. **Intelligence and Coordination:** Pritam Singh established vital, covert operational links with Major Iwaichi Fujiwara of the Japanese intelligence unit, *F-Kikan*. This coordination led to the creation of the Indian National Council (INC) in late 1941, bridging the gap between civilian aspirations and active military planning.

4. The 1942 Bangkok Conference: Setting the Blueprint for the INA

The strategic coordination between these groups culminated in the historic Bangkok Conference (June 15–23, 1942), which fundamentally shaped the military struggle:

1. **Unifying Regional Factions:** The conference brought together over a hundred representatives from across Southeast Asia, establishing the Indian Independence League (IIL) as the central organizational body for overseas Indians.
2. **The 34-Point Resolution:** The delegates adopted a comprehensive framework that provided the official blueprint for the INA. It explicitly mandated that the army would be composed of volunteers and Prisoners of War (POWs) supervised directly by the IIL rather than the Japanese military, preserving Indian geopolitical agency.
3. **Preparing for Total Mobilization:** This established structure allowed Netaji Subhas Chandra Bose, upon his arrival in 1943, to convert a regional network into a highly disciplined, centralized military force capable of launching an armed march toward the Indian border.

Conclusion

The history of the Thai-Bharat Cultural Lodge demonstrates that India's ultimate liberation was closely linked with the broader cause of pan-Asian anti-colonial solidarity. By transforming shared civilizational traditions into an active political network, the founders of the TBCL built the essential infrastructure that allowed Netaji to execute his strategy of total mobilization. The survival of the Lodge as a living archive underscores the truth that the military efforts of the INA were built upon deep-rooted cultural and social foundations.

Source: <https://www.thehindu.com/opinion/lead/the-hidden-history-of-the-thai-bharat-connection/article71101789.ece>

2. India must incubate technologies world uses (IE)

GS Paper III: Science and Technology; Economic Development

Topic: Science and Technology– developments and their applications in everyday life; Indigenization of technology and developing new technology; Industrial policy and its effects on industrial growth.

Sub-Topic: Frontier Technology Innovation, Technological Sovereignty vs Autarky, Structured Public Procurement, Industrial R&D Ecosystems, and Technology's Double-Edge.

1. Introduction

1. **Civilizational Anchoring:** Guided historically by the Vedic hymn "Aano bhadra kratavo yantu vishwatah" ("Let noble thoughts come to us from all directions"), India has long maintained an openness to global knowledge, which now finds its modern expression in the pursuit of innovation.
2. **Currency of Sovereignty:** Technology has transformed into the primary currency of national sovereignty; a nation's position within critical technology value chains increasingly shapes its trade configurations, security setups, and diplomatic leverage.
3. **The Strategic Mandate:** For India, innovation has moved beyond an aspirational goal to become a strategic necessity—serving as the bridge between national aspiration and policy execution. It is

central to the vision of *Viksit Bharat* by seeking to expand citizen access, boost enterprise competitiveness, reduce strategic vulnerabilities, and create irreplaceable global capabilities.

2. Institutional Architecture: The First Innovation Decade

1. **Building the Runway:** The last decade witnessed a sustained policy focus under Prime Minister Narendra Modi to elevate innovation into a national mission, building a foundational institutional runway.
2. **Key Frameworks Launched:** This era established a multi-pronged institutional framework including Startup India, IndiaAI Mission, Anusandhan National Research Foundation (ANRF), iDEX, BIRAC, IN-SPACe, Semicon India, Atal Tinkering Labs, and the Rs 1 Lakh Crore Research and Innovation Fund (R&I Fund).
3. **Expanding Participation:** The first innovation decade successfully widened ecosystem participation by scaling up startups, specialized incubators, digital public infrastructure (DPI), targeted research missions, student hackathons, and novel capital pathways.
4. **The Next Imperative:** India has evolved into an "innovation-dense" nation and must now transition into an "innovation-deep" powerhouse. Progress must be measured by capabilities mastered, critical dependencies eliminated, global value chains entered with structural strength, and lives improved at a scale.
5. **Incubating Talent:** Backed by the Ministry of Education, premier higher education institutions like the IITs and IISc serve as powerful incubators and ready playgrounds for deep-tech talent.

3. The Next Frontier: From Application to Origination

1. **The Capability Pivot:** While India has shown exceptional strength in applying and adapting existing technologies, the next frontier demands full technology origination.
2. **Owning Critical IP:** Origination requires moving past using the world's technology to building the exact technologies that the world relies upon. In every priority sector, India must own the core science, design, data, IP, manufacturing processes, standards, and customer accounts.
3. **Defining Sovereignty vs. Autarky:** Strategic sovereignty does not mean pursuing technological autarky or isolationism. Given India's developmental starting point, its national interests are best served by forming deep partnerships with like-minded countries that offer complementary structural strengths.
4. **Confidence Over Dependence:** True sovereignty means collaborating from a position of confidence rather than dependence, using the "India-France Year of Innovation" framework as a template to build systemic mastery openly and selectively based on mutual strength.

4. Policy Sequencing and Structured Procurement

1. **Calibrating to Maturity:** The relationship between market forces and government policy must be closely calibrated and sequenced according to the maturity of each industrial sector.
2. **Nascency Mandate:** In early-stage, frontier sectors, policy must actively anchor demand and absorb upfront developmental risks.
3. **The iDEX Precedent:** The iDEX (Innovations for Defence Excellence) framework proved that structured public procurement can successfully catalyze a defence innovation ecosystem that would not otherwise emerge via market forces alone.
4. **Maturity Mandate:** As an industry matures, market forces should take over, while state policy pivots to fill gaps through long-horizon research funding, common industry standards, and shared infrastructure that no single private player can fund alone.

5. The Role of Large Enterprises in Ecosystem Building

1. **Beyond First Customers:** India's large corporate houses have a significant role to play by moving beyond being simple "first customers" of the startup ecosystem to comprehensively investing in R&D and co-innovating directly with startups.
2. **Structural Integration:** Large enterprises must structurally integrate startups and MSMEs into their global supply chains, make long-term strategic investments, and deploy rigorous engineering, quality systems, and global market access.
3. **The Ecosystem Approach:** True innovation is an interconnected ecosystem rather than a standalone product. For example, within semiconductors, artificial intelligence, defence, and clean energy, components must move in concert:
4. Within Electric Vehicles (EVs), the vehicle design, battery chemistry, changing networks, software layers, and consumer financing models must advance together. Large corporations possess the balance sheets to pull an entire ecosystem forward.

6. Technology's Double Edge and Socio-Economic Criteria

1. **The AI Paradox:** Policymakers must confront technology's inherent double-edged nature. While Artificial Intelligence (AI) can compress decades of development in healthcare diagnostics and public governance, it can also disrupt labor markets, amplify systemic bias, and widen economic inequality if deployed without careful design.
2. **Empathy-Led Transitions:** India's innovation model must be positive by design—augmenting human capability, creating net-new jobs, and ensuring that technological transitions do not burden the weakest sections of society through planned reskilling and redeployment.
3. **The Discipline of Inquiry:** India cannot build mastery everywhere simultaneously; it must apply rigorous criteria to address its core socio-economic challenges:
 1. Access to quality healthcare, education, sustainability, energy, and food security.
 2. Identifying domains with irreducible domestic demand that can serve as captive testing grounds.
 3. Capitalizing on spaces where India's talent and cost structure create unreplicable advantages, while minimizing import dependencies that create strategic vulnerabilities or adversary exposures during crises.

7. Way Forward: Bharat Innovates 2026

1. **The Global Launchpad:** Organized by the Ministry of Education in France, *Bharat Innovates 2026* serves as a clear declaration that India's most ambitious innovations are ready for the world's most demanding markets.
2. **The Collaboration Bridge:** This initiative acts as a collaboration bridge linking Indian startups and research institutions with global investors, corporates, universities, and markets.
3. **The Value Paradigm Shift:** The initiative shifts the global paradigm from what the world can sell to India, to what global partners can co-build *with* India.
4. **A Laboratory for Consequential Innovation:** For young innovators and researchers, India serves as the world's most consequential laboratory—a square-scale environment where the hardest problems of human development and technological self-reliance must be solved together at a billion-person scale.
5. **The Final Mindset Shift:** India's next innovation chapter will be authored by a generation that prioritizes mastery over mere participation, depth over dispersion, and purpose over convenience.

Source: <https://indianexpress.com/article/opinion/columns/viksit-bharat-innovation-tech-sovereignty-india-10739468/>

Question

"Achieving technological sovereignty in frontier sectors requires a transition from being an 'innovation-dense' nation to an 'innovation-deep' one. Analyze this statement in light of India's current research and development architecture, and suggest how public procurement and corporate partnerships can mitigate risks in technology origination." (250 Words, 15 Marks)

1. Introduction

Technology has emerged as a primary currency of national sovereignty, directly shaping global trade, security, and diplomatic leverage. Over the past decade, India has built a robust "innovation-dense" foundation by expanding its startup ecosystem, digital public infrastructure, and innovation funds (such as the Rs 1 Lakh Crore R&I Fund). However, transitioning into an "innovation-deep" nation requires shifting from the simple application and adaptation of foreign technologies toward complete domestic technology origination.

2. Gaps in the Current R&D Architecture

- The Application vs. Origination Mismatch:** While India excels at developing downstream digital applications, it faces vulnerabilities due to limited ownership of core upstream Intellectual Property (IP), design standards, and component manufacturing depth in critical areas like semiconductors and deep-tech.
- Technology's Double Edge:** Advanced technologies like AI present structural dilemmas. If deployed without proper risk assessment, they can worsen economic inequality, introduce algorithmic bias, and disrupt labor markets, highlighting the need for an empathy-led, human-augmenting innovation model.
- Market Failures in Frontier Sectors:** High capital requirements and long-horizon gestation periods for deep-tech research often discourage private venture capital, causing underinvestment in deep innovation.

3. Mitigating Risks via Public Procurement and Corporate Partnerships

To overcome these barriers and foster true technology origination, India must combine state demand-side policies with private-sector supply chains:

- De-risking via Structured Public Procurement:** In nascent frontier sectors, the state must act as an anchor customer to absorb initial development risks. Following the iDEX model in defence, targeted public procurement can guarantee a captive domestic market for indigenous deep-tech startups, funding early-stage experimentation that pure market forces would ignore.
- Ecosystem Integration by Large Corporate Enterprises:** Large Indian corporations must look beyond short-term vendor relationships to co-innovate directly with deep-tech startups. By investing in long-horizon corporate R&D and integrating local MSMEs structurally into their global value chains (GVCs), large enterprises can provide the technical expertise, strict quality management, and global market networks needed to scale complex engineering platforms.
- Collaborative Sovereignty over Autarky:** India should actively re-align its foreign tech policy away from autarky toward strategic, trusted partnerships with like-minded nations (as seen in the *Bharat Innovates 2026* initiative in France). This approach allows India to co-develop frontier systems based on complementary strengths.

Conclusion

India's path to becoming a structurally resilient economy depends on its ability to incubate the very technologies that the world utilizes. By using public procurement to anchor early-stage demand and leveraging corporate balance sheets to scale deep-tech ecosystems, India can mitigate the financial risks of innovation. This strategy will help transition the nation from an adapter of global tech to an independent originator of critical global technologies.

Source: <https://indianexpress.com/article/opinion/columns/viksit-bharat-innovation-tech-sovereignty-india-10739468/>

3. Moving From Drone Purchases to Drone Partnerships (TH)

General Studies Paper – General Studies Paper III – Indian Economy

Topic – Drones and Manufacturing sector

Sub-Topic – Military equipment manufacturing

Introduction

India's recent \$2 billion procurement of military drones from domestic manufacturers marks a significant milestone in the country's defence modernisation and Atmanirbhar Bharat (self-reliant India) agenda and strengthens indigenous manufacturing.

About Drones/UAVs

1. Drones or Unmanned Aerial Vehicles (UAVs) are aircraft without a pilot onboard. They can be remotely controlled or operate autonomously using technologies like Artificial Intelligence (AI), GPS, sensors and communication systems.
2. **Key Applications** – Surveillance and reconnaissance, Border surveillance, Precision strikes, Logistics and supply delivery, Disaster management and emergency response, Agricultural monitoring and mapping.

Drones in Modern Warfare

1. **Cost-Efficient Force Multipliers** – Drones are able to carry out tasks that are typically done using highly priced combat aircraft and weapon systems at a much lower cost. Recently, **First-Person View (FPV) drones used in the Russia-Ukraine** war can successfully knock down million-dollar armoured fighting vehicles.
2. **Improved Situational Awareness** – Improved real-time ISR helps make decisions on the battlefield.
3. **Precision and Lower Risks** – It is possible to carry out precision strikes through drones without putting the lives of the soldiers at risk.
4. **Electronic Warfare and Adaptable Systems** – Jamming and electronic attacks take place in modern battlefields. The drone systems must be upgraded constantly in order to be operative.
5. **Innovative Cycle** – The development process of drone technology occurs within months and needs flexible procurement policies rather than conventional defences which can stay the same for decades.

India's Domestic Drone Industry

1. **Developing Manufacturing** – More than 600 drone and parts manufacturers exist and more than 100 companies are producing military drones. Start-ups are increasingly taking part in the designing and software, sensor and analytics development of drones.
2. **Interconnected Civilian-Military Innovation** – Developments in surveying, mapping, logistics, disaster management and agriculture often have military applications too.

3. **Emerging Applications** – India Post's cooperation with Skye Air to use drones in logistics for difficult terrains.
 1. Agricultural spraying and crop monitoring are performed in government-sponsored projects.
 2. Inspection of infrastructure and disaster operations.

Challenges in the Drone Ecosystem

1. **Procurement System based on Transactional Approach** – Currently procurement in the defence sector is more or less transactional.
 1. When there is a need for something then there is an issuance of tender and purchase of that particular product.
 2. While good for static technologies, the model does not suit dynamic and fast-moving drones.
2. **Slowly Moving Process of Upgradation** – Effective deployment of drones requires upgradation of their software, sensors, and communication aspects.

The procurement system usually finds it difficult to keep pace with these developments.

3. **Vulnerability to Electronic Warfare** – There are some emerging threats like GPS spoofing, jamming, etc which necessitate continuous changes in drones' systems.
4. **Less Visibility in Long-term Demand for Products** – Manufacturers find it difficult to predict orders and therefore lack incentive to invest in research & development and production capacities.
5. **Dependence on Key Components** – The issue of India's inability to produce advanced sensors, semiconductors, communication devices and propulsions systems domestically continues.

Initiatives and Efforts Related to the Drone Ecosystem in India

1. **Drone Rules, 2021** – It has simplified the regulatory regime by lowering compliance barriers, digitalizing approvals, widening scope of use and developing an industry-friendly environment.
2. **Production Linked Incentive (PLI) Scheme** – The PLI scheme for drones and drones' components will boost domestic production, enhance international competitiveness, draw investments and innovations.
3. **Defence Acquisition Reforms** – The proposed Defence Acquisition Procedure (DAP) will facilitate procurement of COTS systems, thus allowing the armed forces to procure commercial drones easily. The Defence Procurement Manual (DPM) provides the necessary funding for upgrade and maintenance too.
4. **Drone Shakti Programme** – This programme is meant for promoting DrAAS through promoting startups, increasing agricultural applications and making domestic components.
5. **Civilian Applications Expansion** – Various government departments are using drones extensively for governance and service delivery. These include –
6. **Mapping Under SVAMITVA Scheme** – Agriculture Monitoring; Disaster Management; Delivery of logistics and health care; and use of drones for delivery of parcels by India Post in rural areas
7. **Aatmanirbhar Bharat in Defence** – The overall strategy of the government towards indigenisation will encourage domestic design and development, manufacture, import substitution and collaboration between public and private sectors.
8. **Namo Drone Didi Initiative** – The programme will promote the use of drones by women-led self-help groups for agricultural purpose, thus increasing civilian applications and demand for manufacturing of drones.

Way Ahead – A Path toward the Partnership-Based Procurement Approach

1. **Managed Service Approach** – Rather than buying the drones as a commodity, the military can engage in long-term contracts with the suppliers involving –

1. Maintenance and lifecycle support
 2. Software and firmware updates
 3. Parts replacement
 4. Ongoing improvement of capabilities
 5. Quick response to any new threats
2. **Guaranteed Availability and Rapid Production Capability** – Long-term contracts will ensure predictable demand on behalf of manufacturers while providing the military with rapid scaling up in emergencies.
 3. **Innovation Support Structure** – Joint work of the military and industrial sector will allow for prompt feedback, testing and implementation of innovations.
 4. **Procurement Approach Based on Capability** – The key point is not to purchase the equipment, but to support the capability throughout the lifetime of the system.

Source – https://www.thehindu.com/opinion/op-ed/moving-from-drone-purchases-to-drone-partnerships/article71123226.ece#google_vignette

Question

Examine the need to shift from a transaction-based procurement model to a partnership-based procurement framework. Discuss the benefits, challenges, and policy measures required to strengthen India's defence preparedness.

India's recent \$2 billion domestic drone procurement highlights a strategic shift. However, to truly secure defence preparedness, India must move away from standard, **transaction-based procurement** (one-off buying via tenders) toward a **partnership-based framework**.

The Need for the Shift

Unlike conventional hardware that lasts for decades, drone technology evolves within months.

Transactional models fail because –

1. **Rapid Tech Cycles** – Software, sensors, and electronic warfare countermeasures need constant upgrades to prevent obsolescence on dynamic battlefields.
2. **Lack of R&D Incentive** – Short-term contracts offer manufacturers little visibility into long-term demand, stifling private investment in scaling capacity.

Benefits of a Partnership Model

A partnership framework—anchored in a **Managed Service Approach**—offers distinct advantages –

1. **Continuous Capability** – Instead of just buying hardware, the military secures long-term lifecycle support, including immediate firmware patches and parts replacement.
2. **Scalability** – Guaranteed, long-term demand allows private start-ups to build robust production capacities, ensuring rapid scaling during emergencies.
3. **Shared Innovation** – Direct collaboration establishes a tight feedback loop between frontline soldiers and developers for swift iteration.

Key Challenges

1. **Component Bottlenecks** – High dependence on foreign imports for advanced semiconductors, propulsion systems, and core sensors.
2. **Bureaucratic Inertia** – Traditional procurement systems struggle to adapt to fast-moving commercial-off-the-shelf (COTS) integrations.

Required Policy Measures

To operationalize this ecosystem, India must execute focused reforms –

1. **Adopt Capability-Based Contracts** - Utilize the Defence Acquisition Procedure (DAP) to contract for long-term operational availability rather than static commodities.
2. **Deepen Indigenization** - Leverage the Production Linked Incentive (PLI) scheme to specifically target core tech gaps like microchips and propulsion.
3. **Dual-Use Synergies** - Blend civilian programs (e.g., *SVAMITVA*, *Namo Drone Didi*) with military industrial lines to drive down component costs via economies of scale.

Source - https://www.thehindu.com/opinion/op-ed/moving-from-drone-purchases-to-drone-partnerships/article71123226.ece#google_vignette

4. Nfhs-6 Reveals Progress Amid Nutrition Challenges (BL)

General Studies Paper - General Studies Paper III - Health

Topic - National Family Health Survey

Sub-Topic - Child nutrition and maternal health

Introduction

The recently released **National Family Health Survey (NFHS)-6 by MoHFW** highlights India's advancements in child nutrition and maternal health, while also revealing persistent challenges related to infant feeding practices, dietary quality, maternal workload, and local-level implementation gaps.

About National Family Health Survey (NFHS)

1. It was started in the early 1990s with the first NFHS conducted in 1992-93.
 1. Since then, India successfully completed NFHS-2 in 1998-99, NFHS-3 in 2005-06, NFHS-4 in 2015-16 and NFHS-5 in 2019-21.
2. **Main Objectives** -
 1. To strengthen India's demographic and health database by providing information that is both reliable and relied upon;
 2. To strengthen the survey research capabilities of Indian institutions to provide, analyse, and disseminate high-quality data; and
 3. To anticipate and meet the country's needs for data on emerging health and family welfare issues.
3. **Major Indicators Covered** - Maternal and child health; infant and child mortality; nutrition (stunting, wasting, underweight, and anemia); immunisation coverage; fertility and family planning; women's empowerment and gender-related issues; and sanitation, drinking water, and household living conditions.
4. **NFHS-6** was conducted during 2023-24 by MoHFW with the International Institute for Population Sciences (IIPS), Mumbai, as the nodal agency.

Trends in Child Health and Nutrition (NFHS-6)

1. **Reduction in Stunting** - Stunting prevalence among children under five years of age has decreased from 35.5% to 29.3%.
2. **Better Maternal & Child Healthcare** - Currently, over 90% of deliveries are conducted in health facilities, 58% of births are delivered in public health centres, and 91% of deliveries are accompanied by competent health professionals.
3. **Immunisation** - India has achieved nearly 87% complete immunisation coverage for children aged 12-23 months. It helps Mission Indradhanush achieve its objectives of attaining universal immunisation.

Key Concerns and Issues Highlighted in NFHS-6

1. **Persistent Child Undernutrition** – Nutrition is not improving fast enough to achieve SDG and National Nutrition Mission targets.
 1. **Stunting** – 29.3% of children under five years old are still stunted.
 2. **Wasting** – There is no or little improvement, indicating ongoing acute malnutrition. Overall wasting levels remain high and severe wasting has decreased.
2. **Poor Infant and Young Child Feeding Practices (IYCF)** –
 1. **Early breastfeeding** – Only about half of new-borns are breastfed within 1 hour of birth.
 1. **Complementary feeding** – Just about **60%** of children aged **6–8 months** receive solid or semi-solid foods on time.
 2. Only **15%** of children aged **6–23 months** receive an **adequate diet**.
1. **Dietary Quality and Nutritional Inadequacy** – NFHS-6 data shows **poor dietary diversity** in India.
 1. There is **low consumption** of **pulses, fruits, vegetables, nuts, and animal-source foods**.
 2. **Processed foods** and **sugary beverages** are increasingly consumed.
 3. **Healthy diets** are still **unaffordable** for many households.
2. **Maternal Time Poverty** – The survey highlights the **increasing work burden on women**.
 1. Women frequently balance **agricultural work, livestock care, domestic duties**, and both **informal** and **unpaid labour**.
3. **Weak Focus on the First 1,000 Days** – The time from **pregnancy to a child's second birthday** is vital for **physical and cognitive development**.
 1. Key challenges include –
 1. **Limited data** specific to children aged **0–2 years**.
 2. **Growth faltering** often starts before it can be identified.
 3. Most programmes emphasise **treatment** over **prevention**.
4. Other issues include regional and socioeconomic inequities, poor use of nutrition data, low capability of frontline workers such as ASHAs, AWWs, and ANMs, lack of multisectoral convergence, and lack of childcare facilities.

Related Government Initiatives & Strengthening Measures

1. **POSHAN Abhiyaan (National Nutrition Mission)** – It is a mission to minimise stunting, wasting, underweight and anaemia and enhance nutrition among children, pregnant women and breastfeeding mothers.

Key Features –

 1. Real-time tracking and monitoring of growth in Anganwadi Centres;
 2. Jan Andolan (Behaviour Change Communication);
 3. Community-orientated management of malnutrition;
2. **Mission Saksham Anganwadi and POSHAN 2.0** – The programme integrates the Supplementary Nutrition Programme (SNP), POSHAN Abhiyaan and Anganwadi Services.
 1. It is intended for children under 6 years of age, pregnant women, nursing moms and adolescent females.
 2. The focus areas include upgradation of Anganwadi infrastructure and promotion of Early Childhood Care and Education (ECCE).
3. **Other key schemes** include the PM POSHAN Scheme (Mid-Day Meal), Anaemia Mukta Bharat (AMB), Mission Indradhanush, Pradhan Mantri Matru Vandana Yojana (PMMVY), Janani Suraksha Yojana (JSY) and the National Creche Scheme (Palna).

Way Forward – Key Strengthening Measures Suggested by NFHS-6

1. **Nutrition-specific interventions** – encourage breastfeeding within one hour of delivery, encourage timely supplemental feeding after six months, promote nutritional diversity through local foods, and increase counselling services for moms.
2. **Institutional measures** – recruitment of district-level nutritionists and data analysts; improvement of the quality of anthropometric data collection; and use of digital tools for growth monitoring and counselling.
3. **Governance Measures – Make** child nutrition a regular topic in Gram Sabhas and Panchayats and improve coordination between health, ICDS, Jal Jeevan Mission, SBM-G and rural development departments.
4. **Gender-Sensitive Measures** – Promote shared caring by males; increase community-based crèches; and lower the unpaid care burden for women.
5. **Reforms in the food system** – Make pulses, millets, fruits, vegetables and protein-rich foods affordable; and control the use and marketing of ultra-processed meals.

Source – <https://www.thehindu.com/opinion/lead/nfhs-6-reveals-progress-amid-nutrition-challenges/article71118901.ece>

Question

The findings of the National Family Health Survey (NFHS)-6 indicate both progress and persistent challenges in improving child nutrition outcomes in India. Examine the major trends in child nutrition revealed by NFHS-6.

The National Family Health Survey (NFHS)-6 presents a mixed picture of India's child nutrition landscape, highlighting significant structural progress alongside deeply rooted dietary challenges.

Positive Trends – Healthcare and Structural Progress

India has made commendable strides in expanding health infrastructure and baseline child health parameters –

1. **Reduction in Stunting** – The prevalence of stunting among children under five years of age dropped from 35.5% to 29.3%.
2. **Robust Immunization** – Complete immunization coverage for infants aged 12–23 months reached nearly 87%, heavily supporting universal immunization goals.
3. **Safer Institutional Births** – Over 90% of deliveries now occur in health facilities, and 91% are assisted by competent health professionals, establishing a strong foundation for early neonatal care.

Distressing Trends – Dietary Quality and Feeding Practices

Despite these institutional gains, immediate nutritional and caloric intake metrics remain critical bottlenecks –

1. **Stagnant Wasting Levels** – Unlike stunting, child wasting (acute malnutrition) has shown little to no improvement, highlighting an ongoing crisis of immediate nutritional deficits.
2. **Flawed Feeding Practices** – Only about half (50%) of newborns are breastfed within the crucial first hour of birth. Furthermore, just 60% of infants aged 6–8 months receive timely complementary solid or semi-solid foods.
3. **Severe Dietary Inadequacy** – A staggering 85% of children aged 6–23 months fail to receive an adequate diet, with a mere 15% meeting basic nutritional thresholds.

The Diversity Crisis – NFHS-6 highlights a distinct shift toward poor dietary diversity. While healthy, nutrient-dense foods like pulses, fruits, vegetables, and animal proteins remain unaffordable for many,

there is a worrying increase in the consumption of empty-calorie processed foods and sugary beverages.

Ultimately, the trends show that while India is successfully delivering clinical health interventions, it faces a steep hurdle in translating those gains into quality, diverse, and affordable daily diets for its children.