'A Roadmap For Strengthening State S&T Councils' Report Released by NITI Aayog

The report **outlines issues and challenges** and identifies pathways for evolving State S&T Councils into strategic enablers of innovation, aligned with the national vision of Viksit Bharat by 2047.

- **State S&T Councils** were established in 1971 under the initiative of the **National Council for Science and Technology.**

Issues and challenges in functioning of State S&T Councils

- **Inadequate financial resources and utilization issues: E.g.** Uneven funding & delayed budgets limit operations and research sustainability.
- **Shortage of skilled manpower: E.g.** Unfilled scientific positions and poor work culture reduce research output.
- **Weak inter-institutional and industry linkages (low global exposure and poor tech-transfers)** and
- **Regulatory and administrative bottlenecks:** It leads to delays & unaccountability.

Recommendations of NITI Aayog

- **Financial Support and Resources:**
  - State governments should allocate **at least 0.5% of GSDP as S&T budget.**
  - Shifting from core-grant by the Central Government to **project-based and performance-based grants.**
- **Human Resources:**
  - Maintain a **70:30 scientific to non-scientific** staff ratio
  - Enhance capabilities via **Faculty and Researcher secondment** and utilizing **retired scientists from centre-level.**
- **Collaboration and Linkages** with industries & **redefine programs** (map state resources with institutional partnerships)

Vice President (VP) Called for Preserving India's Traditional Knowledge System

Addressing the **inaugural annual conference of the Indian Knowledge System (IKS),** VP highlighted that India's rise as a global power must be accompanied by the rise of its intellectual and cultural gravitas.

What is the Traditional Indian Knowledge System (IKS)?

- It encompasses a **millennia-old intellectual tradition** covering fields like art, music, dance, drama, to mathematics, astronomy, science, technology, etc., hidden in **Sanskrit, Prakrit, Tamil, Pali, etc.**
  - **For example,** ayurveda, yoga, Surya Siddhanta, Natya Shastra, number systems (including zero), etc.
- **Global Centres of Learning: Takshashila, Nalanda, Vikramashila, Vallabhi, Odantapuri,** etc. were global universities in ancient India, where seekers came from **Korea, China, Tibet, and Persia.**

Need for Safeguarding IKS

- **Decolonization of Mind:** To undo the colonial legacy that **undervalued indigenous thought** systems and imposed Western epistemologies as universal truths.
- **Prevent Marginalization of Knowledge System:** Dominance of **European cultural perspectives hinders India's TKS integration into mainstream academia. E.g.,** attempts of **patent application for healing properties of haldi** in the US.
- **Limited Engagement: Young scholars are discouraged** from pursuing IKS as a field of study as it is often **misunderstood, misrepresented, or relegated to the periphery.**
- **Soft Power:** IKS can boost **cultural diplomacy** (e.g. International Yoga Day), **academic influence** (e.g., revival of Nalanda university), **tourism** (e.g., ingenious architecture of World Heritage Sites like Rani ki Vav)

Steps Taken to Preserve IKS
- **Traditional Knowledge Digital Library (TKDL):** Established in 2001 by the CSIR and Ministry of AYUSH to prevent misappropriation of Indian traditional knowledge (TK) through **intellectual property rights.**
- **Indian Knowledge Systems (IKS) Initiative:** It focuses on integrating traditional Indian knowledge into contemporary education.
- **Project 'Mausam': It** seeks to revive and strengthen **ancient historical maritime cultural and economic ties** among countries along the Indian Ocean.
- **Legal measures: Biological Diversity Act, 2002 & Indian Patents Act, 1970** provide legal protection from fraudulent claims on traditional knowledge systems.

European Commission Chief Calls For An Alternative To The World Trade Organization (WTO)
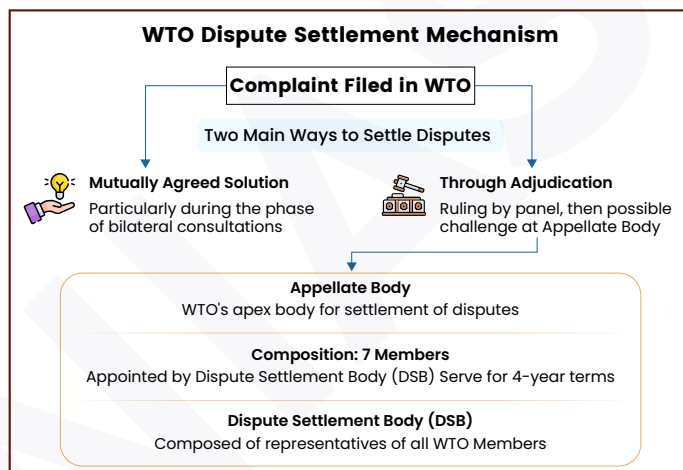
A Suggestion was made for a **Europe-led trade initiative with Asian countries** to create a **new trade cooperation framework**, as the **WTO remains stalled.**

What is the WTO?

» **Genesis:** Established in **1995,** replacing the erstwhile **GATT** (General Agreement on Tariffs and Trade) **of 1947.**
  ⊕ GATT was only a provisional arrangement, not a whole organisation.
» **Mandated:** To regulate different aspects of **international trade across: goods, services, and intellectual property.**
» **Members:** 166 members (including India)
» **Decision Making:** By **consensus**

What are the WTO's main challenges?

» **Dispute Settlement Paralysis:** Since 2016, the US has blocked appointments to the WTO's Appellate Body.
  ⊕ This has made the **Dispute Settlement System (refer to the infographic) non-functional,** weakening global rule enforcement.
» **Inequity in the System:** WTO is often seen as **favouring developed countries.** Developing nations struggle to fully participate in international trade due to High trade barriers, Poor infrastructure, Limited resources.
  ⊕ WTO members have **not been able to agree on new rules on agricultural goods** due to such conflict.
» **Opaque Decision-Making: Lack of transparency** and limited involvement of developing countries creates **mistrust and questions the WTO's legitimacy.**
» **Rise of Regional and Bilateral Trade Blocs:** More countries are forming regional and bilateral trade pacts like EU, **CPTPP, AfCFTA.**
  ⊕ These frameworks **weaken the WTO's role and risks creating fragmented global trade rules.**
» **US-China Trade Conflicts:** Unilateral actions (e.g., US tariffs on steel) and ongoing tensions strain WTO operations.

India, seen as the leader of Global South, has a crucial opportunity to **champion WTO reforms and address the long-standing concerns of the Global South.**

WTO Dispute Settlement Mechanism

Complaint Filed in WTO

Two Main Ways to Settle Disputes

💡 **Mutually Agreed Solution**
Particularly during the phase of bilateral consultations

⚖️ **Through Adjudication**
Ruling by panel, then possible challenge at Appellate Body

Appellate Body
WTO's apex body for settlement of disputes

Composition: 7 Members
Appointed by Dispute Settlement Body (DSB) Serve for 4-year terms

Dispute Settlement Body (DSB)
Composed of representatives of all WTO Members

WASH Progress Tracker 2025 Highlights Funding Gaps

WHO and UNICEF released an updated **tracker for WASH In Health Care Facilities** for more than 100 countries, showing progress on improving **Water, Sanitation, and Hygiene (WASH) across eight steps.**

» Linked to the 2023 United Nations General Assembly Resolution on **WASH, waste and electricity in health-care facilities.**
» It reveals that **only 17% of countries have adequate funding** to improve these services.

About WASH and Its Importance

» WASH is a collective term for Water, Sanitation and Hygiene relating to
  ⊕ **Access to safe** drinking water
  ⊕ **Improved sanitation facilities**
  ⊕ **Maintaining basic level of hygiene**
» **Importance**
  ⊕ **Sustainable Development Goals (SDGs), 2030:** Linked to **SDG3** (Good health and well-being) **SDG 6** (Ensuring management of water and sanitation for all)
    ◆ WASH is critical for reducing infections like cholera, diarrhea (3rd leading cause of deaths in **children 1–59 months of age),** sepsis, and neglected tropical diseases.
    ◆ The lack of toilets in schools causes dropouts, especially among girls.
  ⊕ **Protects Human Rights:** Clean water and sanitation are basic human rights as recognized by UN.
» **India's Status: Progress tracker recognizes India's efforts** for **Wash in health care facilities standard;** Infrastructure improvements; Wash indicators in national monitoring; etc.

Major WASH Initiatives

» **National**
  ⊕ **Swachh Bharat Mission (SBM):** To eliminate open defecation.
  ⊕ **Jal Jeevan Mission (2019):** Ensures tap water supply to every rural home. 80.15% households have tap water supply in their homes. .
  ⊕ **Namami Gange:** Focuses on cleaning and conserving the Ganga River.
» **Global**
  ⊕ **Protocol on Water and Health:** It is the **only international legal agreement** linking **sustainable water management** and the prevention, control and reduction of **water-related diseases in Europe.**
    ◆ **Jointly supported by** WHO/Europe and the UN Economic Commission.
  ⊕ **UN Resolution (2010):** Recognized safe water and sanitation as human rights.
  ⊕ **WHO WASH Strategy (2018–25):** Aims to improve health through better water, sanitation, and hygiene.
  ⊕ **UNICEF WASH Strategy (2016–30):** Supports SDG 6 (Clean Water & Sanitation for all).
  ⊕ **UN Sanitation and Hygiene Fund (2020):** Funds high-burden countries to improve sanitation.

India Urges IMO For Comprehensive Investigation And Global Review Of Maritime Incidents

It comes in the backdrop of increased maritime incidents involving **undeclared hazardous cargo on foreign vessels in Indian waters.**

- **It has led to** concerns about the **safety protocols surrounding global container shipping operations.**
- It also drew IMO's attention towards improving global standards around packaging, declaration, stowage, and monitoring of lithium-ion batteries and other dangerous goods categorized under **International Maritime Dangerous Goods (IMDG) Code.**

Role of the IMO in Maritime Safety and Environment Protection.

International Maritime Organization (IMO)
- Established in 1948, it is a **specialized agency of the United Nations.**
- **Members:** 174 **(India is a Member)**
- **Headquarter: London,** United Kingdom
- **Role:** safety and security of shipping and the prevention of marine and atmospheric pollution by ships

Role of the IMO in Maritime Safety and Environment Protection

🤝 Key Conventions	🎯 Objectives
International Convention for the Safety of Life at Sea (SOLAS),1974	Establishes minimum safety standards for ships, fire protection, navigation, operational safety.
International Convention for the Prevention of Pollution from Ships (MARPOL), 1973	Preventing and minimizing pollution by oils, chemicals, sewage,garbage etc.
International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) and OPRC-HNS Protocol (2000)	Requires countries to develop contingency plans and establish cooperation for oil spill response.
International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS Convention)	Regulates the use of harmful anti-fouling systems (substances used to prevent marine organisms from attaching to ships' hulls).
Ballast Water Management Convention	Prevent the spread of harmful aquatic organisms and pathogens and preventing introduction of invasive species into new marine environments.
The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (Hong Kong Convention)	Ensures that recycled ships do not pose unnecessary risk to human health and safety or to the environment.

Also In News

Autonomous District Councils

Governor's rule has been imposed in Chakma Autonomous District Council in Mizoram under the Sixth Schedule.

What are Autonomous District Councils (ADCs)?

- ADCs are **administrative bodies,** established under the Sixth Schedule of the Constitution, to govern tribal areas in **Assam, Meghalaya, Tripura and Mizoram.**
- **Objective:** ADCs ensure tribal autonomy, preserve their distinct identity, and promote development in tribal-dominated regions.
- **Functions:**
  - ⊕ **Enact laws** on matters like land, forests, social customs, etc.
  - ⊕ **Manage local governance,** including education, health, etc.
  - ⊕ **Establish village or district Council Courts** to adjudicate disputes based on customary laws.
- **Structure:** Not more than **thirty members (in general),** of which **four (**maximum **) can be nominated** by the Governor.

Reservation in Local Bodies

A 42% quota for Backwards Classes in local body polls was approved by Telangana.

- **Article 243D** (for Panchayats) and **Article 243T** (for Municipalities), inserted through **73rd and 74th (respectively) Constitutional Amendments of 1992,** allow **States** to reserve seats and Chairperson posts for **Backward Classes.**

Other Provisions Under Article 243D and Article 243T

- **SCs/ STs:** Seats are reserved for SCs/STs based on their **population (as nearly as possible),** with **rotation among constituencies.**
  - ⊕ **At least 1/3rd of these seats is reserved for SCs/STs women.**
- **Women:** At least **1/3rd of the total seats are reserved for women** (including reservation of women for SC/ST seats)
- Seats for **Chairperson could be** reserved for **SCs, STs, and women** as per the law enacted by **States.**

Panch Sankalpa of NEP 2020

Union Education Minister introduced the **"Panch Sankalpa"** (Five Resolutions) under the **National Education Policy (NEP) 2020.**

- NEP 2020 aims to: Improve the quality of education (school, higher education and technical education) in India.
- **Access, Equity, Quality, Affordability and Accountability** are its foundational pillars.

About Panch Sankalpa

- These will be the **guiding principles for transforming higher education institutions.**
- It incorporates:
  - Next-Gen Emerging Education,
  - Multidisciplinary Education,
  - Innovative Education,
  - Holistic Education,
  - Bharatiya Education

Status of Higher Education in India

- **Gross Enrollment Ratio (GER):** 28.4% (Target: 50% by 2035)
- **Female GER:** 28.5% (higher than male); **Gender Parity Index:** 1.01
- **Government Universities** contribute **73.7% of total enrollment.**

Machine Vision-Based Inspection System (MVIS)

The Indian Railways has signed a MoU with DFCCIL to enhance train safety with the installation of MVIS inspection systems.

Machine Vision-Based Inspection System (MVIS)

- It is a modern technology solution based on **Artificial Intelligence/Machine Language**
- It is equipped with technologies that **capture high-resolution images of the under-gear of moving trains** and **automatically detect any hanging, loose, or missing components.**
- **It generates real-time alerts** to facilitate prompt response and preventive action.

Public Gambling Act, 1867

Enforcement Directorate (ED) has filed a case under the **Prevention of Money Laundering Act (PMLA)** 2002 against several celebrities for promoting **illegal betting apps** and violating the **Public Gambling Act, 1867.**

- **PMLA was enacted** to combat money laundering. FIU-IND **(Financial Intelligence Unit)** and the **Enforcement Directorate** have been conferred with exclusive and concurrent powers to implement the provisions of the Act.

Public Gambling Act, 1867

- **Betting and gambling** are strictly prohibited under the Public Gambling Act, 1867.
- **Applicable States:** Covers states like **Delhi** and **Uttar Pradesh.**
- **Exemption: Games of skill** are allowed.
- **State Control:** States can **amend** the Act as **gambling is a state subject** under the 7th Schedule.
  - **Betting and gambling** are generally considered **illegal in most regions across the country.**

S-400 Air Defence System

Ministry of Defence has identified Indian firm to establish a **maintenance repair and overhaul (MRO) facility for the S-400 air defence system.**

About S-400 system

- **Long-range surface-to-air missile (SAM)**
- It is **acquired from Russia.**
- Called **Sudarshan Chakra** in India.
- Equipped with a **command-and-control system, phased array radars** and **electronic warfare countermeasures.**
- Offers complete **360-degree radar and missile coverage.**
- Multi-missile compatibility **enables layered defence.**
- Can track and engage **multiple targets at once**
- **Range & Capability**
  - **Speed:** Around 13-14 Mach
  - **Tracking:** Up to 600 km
  - **Engagement:** Up to 400 km
  - **Altitude Coverage:** From 30 meters to 30 km

Island Protection Zone (IPZ)

The Union Environment Ministry has extended the validity of infrastructure projects approved under the 2011 Islands Protection Zone (IPZ) notification.

About IPZ

- **Notified in 2011** under the **Environment (Protection) Act, 1986.**
- IPZ is a **regulatory framework** to safeguard the **ecological integrity of** Andaman & Nicobar and Lakshadweep groups of islands.
  - It is similar to the **Coastal Regulation Zone (CRZ)** except that CRZ is notified for the protection of coastal areas of mainland India.
- **Regulation includes:-**
  - **Island Coastal Regulation Zone (ICRZ)** for Middle Andaman, North Andaman, South Andaman, Little Andaman, etc.
  - **Integrated Islands Management Plans (IIMPs)** applicable to all other islands of Andaman and Nicobar and all islands of Lakshadweep.

Financial Aid Under SDRF And NDRF

Central Government has released ₹1000 crore to **Assam, Manipur, and Uttarakhand as the Central share** of the **State Disaster Response Fund (SDRF)** for flood and landslide relief.

Financial Aid Under SDRF And NDRF

- According to the **National Policy on Disaster Management,** the primary responsibility for disaster management and on-the-ground relief lies with the **State Governments.**
- States use the **State Disaster Response Fund (SDRF)** for relief measures, based on norms approved by the Government of India.
- In case of **severe disasters,** extra funds are provided from the **National Disaster Response Fund (NDRF)** after assessment by an **Inter-Ministerial Central Team (IMCT).**
- **Note:** Assistance from SDRF/NDRF is for **relief only,** not for **compensation of individual losses.**