

Draft National Sports Policy (NSP), 2024 released by Ministry of Youth Affairs and Sports

The NSP 2024 would build upon previous initiatives such as the NSP 2001, Khelo India Scheme, and Target Olympic Podium Scheme (TOPS).

Key features

- **Need:** Existing NSP was formulated more than two decades ago.
 - ⊕ Formulating a **new comprehensive NSP** that encompasses the **latest developments in the field of Sports** and presents a **roadmap to address the present and future challenges is imperative.**
- **Vision:** "Sports for Nation Building – Harness the Power of Sports for Nation's Holistic Development", in line with principles of 'Viksit Bharat'
- **5 Pillars:**
 - ⊕ **Excellence on the Global Stage:** Enhanced infrastructure, talent identification, etc.
 - ⊕ **Sports for Economic Development:** Leveraging sports to boost industries such as tourism, manufacturing, etc.
 - ⊕ **Sports for Social Development:** Promoting **Indigenous games** and facilitating inclusivity, health, and education through sports.
 - ⊕ **Sports – A People's Movement:** Engaging communities, establishing **National Fitness Ranking & Indexing system**, revamping the **Physical Education Framework** etc.
 - ⊕ **Harmonize NSP 2024 with NEP, 2020:** Integrating sports with education.

As one of the **youngest nations in the world**, with a fifth of the global youth population (i.e., between the age group 15-29), India possesses **immense potential to leverage sports as a catalyst for national development.**



ISRO announces target date for launch of Venus Orbiter Mission

Recently, Union Cabinet approved the **Venus Orbiter Mission (VOM)** as **India's maiden mission to Venus.**

About VOM

- **Target date for launch:** March 2028; it'll take 112-days to reach Venus.
- **Launch Vehicle:** Launch Vehicle Mark-3 (LVM-3).
- **Objectives of VOM:** **Examine dust in Venusian atmosphere and its airglow, mapping its surface topography, studying solar X-ray spectrum and investigating sub-surface characteristics.**
 - ⊕ **VOM will also demonstrate technologies:** e.g., **testing aerobraking and thermal management techniques** in harsh Venusian environment.
- **Payloads:** **19 payloads have been recommended to be onboard VOM**, of which 16 are Indian payloads, 2 are Indian and international collaborative payloads, and 1 international payload.

Key Scientific payloads/ experiments recommended for VOM

- **Venus Thermal Camera:** For understanding atmospheric dynamics and Venusian clouds.
- **Narrow band oxygen Airglow detection in Venusian Atmosphere (NAVA):** To measure airglow emissions.
- **Venus Advanced Radar for Topside Ionosphere and Subsurface Sounding (VARTISS):** To study structure of ionosphere; study active volcanic hotspots and detect buried features.
- **Venus Orbit Dust Experiment (VODEX):** To study Interplanetary Dust Particles (IDPs) at Venus.
- **Other Payloads:** Venus Ionospheric and Solar Wind Particle AnalySer (**VISWAS**), Radio Anatomy of Venus Ionosphere (**RAVI**); and **VIRAL** (Venus InfraRed Atmospheric gases Linker) developed by Russia, etc.



Other Important Venusian Missions

- **Pioneer Venus (1978) by NASA and Vega (1985) by USSR:** Expanded understanding of Venus's atmosphere.
- **Venus Express (2005) by European Space Agency and Akatsuki (2015) by Japan:** Studied atmospheric dynamics, climate evolution, and surface features.
- **Future Missions:** NASA'S **DAVINCI** (2029) and **VERITAS** (2031); EnVision - ESA's Venus Orbiter (2031).

Bhabha Atomic Research Centre (BARC) Participated in International Atomic Energy Agency (IAEA) Scientific Forum 'Atoms4Food'

About 'Atoms4Food'

- **Genesis:** Jointly launched by IAEA and FAO at the **2023 World Food Forum in Rome (Italy)**.
- **Purpose:**
 - ⊕ To provide countries with tailored solutions by **harnessing the advantages of nuclear techniques along with other advanced technologies** to enhance agricultural and livestock productivity, reduce food losses, etc.
 - ⊕ To help countries **boost food security and to tackle growing hunger**.
 - ◆ **Nearly 600 million people** are projected to be **chronically undernourished by 2030 (FAO)**.
 - ◆ **By 2050 the world's population** will have **increased by one-third**, mostly in developing countries (UN).

Nuclear Technologies for agriculture

- **Irradiation technique:** Extends shelf life of foods by **reducing or eliminating microorganisms and insects**.
- **Fallout radionuclide (FRN) technique:** Analyzes soil radionuclide concentrations to **measure erosion patterns**.
- **Cosmic-ray neutron sensor (CRNS) technology:** Measures soil moisture over large areas by detecting cosmic ray neutrons reflected from soil.
- **Radioimmunoassay (RIA) technology:** Detects hormone levels in animals enabling **precise timing for artificial insemination**.
- **Sterile insect technique (SIT):** Controls pests by **releasing sterilized insects to mate with wild populations**.
- **Other technologies:** **Nitrogen-15** to measure nitrogen fixation in roots; **isotropic tracing techniques** for crop nutrition and water management; etc.

Steps taken by India to leverage nuclear technologies for enhancing food security

- Provisions for **multiproduct food irradiation units** under the **Pradhan Mantri Kisan SAMPADA Yojana (PMKSY)**.
- BARC has pioneered the **development of 42 high-yielding seed varieties through Gamma irradiation**.
- BARC has established two major irradiation facilities at **Vashi and Nashik** in Maharashtra.

A Balanced approach towards Workers' and Manufacturers' interests needed amidst Strikes: GTRI

In a recent Flagship Report, GTRI warned that **Samsung Strike in Tamil Nadu** risks repeating Nokia's Collapse a decade ago and called for **prioritizing protection of worker's rights** while maintaining **industrial stability**.

- A combination of **tax disputes with Tamil Nadu government** and mounting **union pressures** crippled **Nokia's** (one of India's most successful mobile phone manufacturers) operations, leading to the **plant's closure in 2013**.
- **Reasons for the ongoing strikes** by Samsung workers include **demand for instant approval of proposal to form union, hike in wages, working time of 8-hours**, among others.

Impact of these Strikes on Indian Economy

- **On manufacturing ecosystem:** Hamper the ambitions of India in electronics manufacturing and lead to **shifting of the manufacturing dominance to China**. e.g., **Nokia closure in 2013** shifted mobile manufacturing dominance to China.
 - ⊕ **Instability** due to strikes leads to **losses** for companies, **supply-chain disruptions**, and **discourages investment by investors and MNCs**.
- **On Labour force:** May result in **wage losses** during strike periods and potential **job insecurities**.
- **On Government:** India is in the midst of **reviewing its Free Trade Agreements (FTAs) with South Korea and ASEAN** countries. Any escalation of the strike could **negatively impact these negotiations**.

Measures to be taken towards resolution

- **Formulation of clear laws and formulation of SOPs:** To protect workers', manufacturers' interests.
- **Role of state government:** Encourage **industry-wide policy discussions** on wage benchmarking, safety, and welfare measures including all stakeholders.
- **Role of Industry:** Samsung must **address legitimate concerns of the workers** by establishing a formal worker representation committee.
- **Fast-Track Dispute Resolution Mechanism:** A proactive **labour dispute resolution framework** to help prevent labour unrest from escalating into full-scale strikes.

CareEdge Released Its Inaugural Report on Sovereign Ratings, Covering 39 Global Economies

CareEdge became the **first Indian credit rating agency** to enter the global scale ratings space, including **sovereign ratings**.

Key Highlights

- Assigned an **AAA rating to Germany, Netherlands, Singapore, and Sweden**.
- **India** was assigned **BBB+**, citing its resilient **post-pandemic recovery** and its **focus on infrastructure investment**.
- **India's general government debt-to-GDP ratio** is projected to **reduce from 80% (currently) to 78 % by FY30**.

About Sovereign Credit Rating (SCR)

- **Credit ratings** are forward-looking opinions on the **relative ability of an entity to meet its financial commitments, i.e., credit risk or relative creditworthiness** of a borrower.
 - ⊕ **SEBI regulates domestic credit rating agencies (CRISIL, ICRA, CARE etc.)**.
- SCR represent an **assessment of a country's or sovereign entity's ability to meet debt obligations**, including both **capability and willingness** to repay debt.
- SCR facilitates **borrowing from global capital markets at low cost, boosts investors' confidence, attracts foreign investment**, etc.
- Currently, SCRs are **dominated by 3 US-based rating agencies** – S&P, Moody's, and Fitch.

Issues prevailing in SCR rating by US-based rating agencies

Several nations, including India, have questioned grading by global credit rating agencies, citing reasons like:

- **Lack of transparency** on methodologies followed by rating agencies.
- **Inadequately capturing the economy's fundamentals**.
- **Biased against emerging economies**.
 - ⊕ **Despite India being 5th largest economy in the world and having no default history**, global CRAs have assigned it a **low rating**.

NOTE: To know more about India's domestic Credit Rating Agencies (CRAs), kindly refer to the News Today dated 6th July 2024

'Benchmarking Infrastructure Development' report released by World Bank Group

Report analyzes PPP regulatory landscapes across 140 economies and suggests a significant correlation between regulatory reforms relating to PPPs and PPP infrastructure investments.

➤ **PPP** is an approach under which **public services are delivered by private sector** (both non-profit and for-profit organizations) while **responsibility for providing resources rests with the government.**

Key Highlights of the report

- **Public Fiscal Management System (PFMS):** Only 19 economies have adopted specific provisions for budgeting, reporting, and accounting, and only 18 economies publicly disclose PPP liabilities.
 - ⊕ **Robust PFMS helps mitigate potential financial sustainability challenges** that a distressed or cancelled PPP could create.
- **Monitoring and Evaluation:** Only 37% of the economies require payments linked to performance.
- **Renegotiation of PPP contracts:** Expressly regulated by ~90% surveyed economies with the issue of changes in risk allocation explicitly addressed in only 19% of the economies.

Challenges to PPP in India

- **Financial:** Aggressive bidding and project underpricing, inadequate 'creative destruction', project delays resulting in cost overruns, etc.
- **Capacity and procedural challenges:** Inadequate management capacity of public sector, delays in obtaining requisite clearances such as Environmental Impact Assessments, etc.
- **Regulatory and Institutional gaps:** Absence of comprehensive National PPP policy, inadequate information availability and reliability about private sector service providers, etc.

Existing PPP Regulatory Framework in India

- **Private Investment Unit under Department of Economic Affairs (Union Ministry of Finance):** Responsible for policy-level matters concerning PPPs.
- **PPP Vertical under NITI Aayog:** Makes policy-level recommendations towards the standardisation of PPP documents. It is also **steering recycling and monetisation of core infrastructure assets** to unleash 'creative destruction'.

Kelkar Committee (2015) Recommendations on PPP

- **Establish Independent Sectoral Regulators:** To ensure harmonized performance in sectors going in for PPP.
- **Discourage unsolicited proposals (Swiss Challenge):** To address information asymmetry and lack of transparency.
- **Establish National Facilitation Committee** to ensure time-bound resolution of issues including getting timely clearances.

Also in News



Very Short Range Air Defence System

DRDO successfully conducted flight-tests of the **4th Generation, technically-advanced miniaturised Very Short Range Air Defence System (VSHORADS)** at Pokhran Range, Rajasthan.

➤ The trials showcased **repeatability of hit-to-kill capability** of the weapon system.

About VSHORADS

- It is an **indigenously developed man portable air defence system (MANPAD).**
- Designed and developed by **Research Centre Imarat (RCI)** in collaboration with **DRDO laboratories** and **Development cum Production Partners (DcPPs).**
- It is meant to **neutralize low altitude aerial threats at short ranges.**
- It employs a **dual thrust solid motor** and a **state-of-the-art uncooled imaging infrared seeker.**



Biodiversity Credits

A coalition of civil society organizations has raised concerns over promotion of biodiversity credits.

Biodiversity Credits

- **Definition:** An **economic instrument** that **allows private companies to finance** activities, such as **forest conservation or restoration.**
- **Purpose:** To have a **net-positive impact on nature and biodiversity.**
 - ⊕ Unlike biodiversity offset, biodiversity credits are **not limited to compensating** for companies' negative and unavoidable impacts on nature.
- **Functioning:**
 - ⊕ **Stakeholders** that have a goal to conserve or restore land **generate a supply of credits, or certificates.**
 - ⊕ **Private companies** then **purchase these credits to meet their biodiversity- or nature-based commitments.**



Dry Ports

Telangana is planning to develop more dry port facilities to boost exports.

About Dry Ports

- Also known as **inland port**, it is an **inland terminal** that is meant to provide **connectivity to a sea port by rail or road.**
- It includes **Inland Container Depots (ICDs), Container Freight Stations (CFSs), and Air Freight Stations (AFSs), etc.**
- **Benefits:** Provide a more **efficient and cost-effective gateway to international trade** for landlocked states/ regions, **reduces pressure on coastal ports**, easing congestion and improving efficiency, etc.



Black Carbon

According to a recent study, black carbon emissions from kerosene lamps make up 10% of total residential emissions in India.

About Black carbon (BC)

- BC, commonly known as soot, is a **component of fine particulate air pollution (PM2.5).**
- Formed by **incomplete combustion of wood and fossil fuels.**
- It has a **warming impact up to 1500 times stronger than CO₂** per unit of mass.
- It is a **Short-Lived Climate Pollutant (SLCPs)** with an **average atmospheric lifetime 4-12 days.**
- **Climate and Clean Air Coalition (CCAC)** (founded in 2012) convened within UNEP, is a voluntary partnership to reduce powerful but SLCPs including **Methane, BC, hydrofluorocarbons (HFCs), and tropospheric ozone.**



Danainae Sub-family of Butterflies

According to a recent study, **large-scale migration of butterflies of the Danainae sub-family** was observed in **Tamil Nadu** (between **Anamalai Tiger Reserve and Nilgiris**) due to good rainfall.

About Danainae sub-family of Butterflies (Milkweed Butterflies & Glasswings)

- It includes butterflies such as **Blue Tiger, Dark Blue Tiger, Double-branded Crow, and Common Crow** and thus called 'tigers and crows'.
- They have a **unique migration pattern**:
 - ⌚ **Before start of northeast monsoon**: From **Eastern Ghats and plains** towards various nearest hill ranges of **Western Ghats**.
 - ⌚ **Before onset of southwest monsoon**: From **Western Ghats hill ranges** towards **Eastern Ghats and plains of Tamil Nadu**.



Motor Neuron Disease

Researchers have developed **DNA molecules with "invisibility cloak" sequences** that can **selectively target diseased cells in motor neuron diseases**.

About Motor Neuron Diseases

- A **group of neurodegenerative diseases** in which **motor nerves in the spine and brain lose function** over time.
 - ⌚ **Motor nerves control skeletal muscle activity** such as walking, breathing, speaking, and swallowing.
- **Types**:
 - ⌚ **Amyotrophic Lateral Sclerosis**: Causes **rapid loss of muscle control** and eventual paralysis (Stephen Hawking suffered from it).
 - ⌚ **Progressive bulbar palsy**: Affects muscles involved in speech, swallowing, etc.
 - ⌚ **Spinal muscular atrophy**: Affects the trunk, legs, and arms.



Extinction of Birds

According to research by University of Birmingham about **610 bird species** (mostly on islands) have been extinct over past 130,000 years (coinciding with global spread of Homo sapiens)

Key extinct Birds

- **Dodo (Mauritius)**: Finely adapted to its isolated ecosystem it was first encountered by Dutch sailors in 16th century.
- **Aepyornis maximus (Madagascar)**: Also known as elephant birds. It was a flightless and possibly largest bird that ever existed (about 3 meters tall).
- **Other birds**: **Kauai** (Hawaiian songbird), **Moa birds** (New Zealand), **North America's migratory passenger pigeon**



Unified Genomic Chip

Prime Minister launched the 'Unified Genomic Chip' and **indigenous sex-sorted technology**.

- **Indigenous sex-sorted technology** will **increase the availability of sex-sorted semen** for farmers at a reduced cost for producing **only female calves**.

About Chip

- **Aim**: Helping farmers **identify high-quality cattle** early and **enhance dairy farming efficiency** in India.
- **Developed by**: Department of Animal Husbandry and Dairying
- **Two versions**: 'Gau Chip' for cattle and the 'Mahish Chip' for buffalo.

Personality in News



Rani Durgavati (1524 - 1564)

Queen of the Gond kingdom of Garha-Katanga Rani Durgavati was remembered on her 500th Birth Anniversary (October 05).

About Rani Durgavati

- She was born in **Kalinjar** in Banda district (UP).
- She was a **descendant of Chandela dynasty of Mahoba** and a **contemporary** to Mughal emperor **Akbar**.

Key Contributions

- Took the **reins of the Gond kingdom** in her hands after her husband's death.
- Repulsed attack by **Baz Bahadur, ruler of Malwa** [mentioned in **Tarikh-i-Firishta** (Persian source)].
- Was a patron of learning, and allowed **Acharya Bitthalnath** to establish a seat of **Pushtimarg Cult** at Garha.
- Constructed reservoirs such as the **Ranital, Cherital, and Adhartal**.
- Defended her kingdom to death against **contemporary Mughul Subedar Abdul Mazid Khan**.
 - ⌚ Her encounter with Mughals was documented by **Abul Fazl**, Akbar's chronicler and other Persian writers.

Values: Courage of conviction, Fortitude, etc.

