



DAILY CURRENT AFFAIRS 24-01-2024

GS-1

1. Bobbili Veena

GS-2

2. India-Bangladesh ties

GS-3

3. Mosquitofish
4. NISAR Mission
5. Rabbit r1

Bobbili Veena

Syllabus: GS-1; Art and Culture

Context

- *In recent years Bobbili Veena craftsmen struggle for livelihood.*



About

- *The Bobbili veena is a large plucked string instrument used in **Carnatic classical music**.*
- *It is also known as the "**Saraswati veena**". The instrument is named after Bobbili, the place where it was invented.*
- *The Bobbili veena is known for its fine tune and distinctive notes. It is made from Jack-wood tree logs in Gollapalli, a town in Bobbili.*
- *In 2011, the Government of India gave the instrument a Geographical Indication tag.*

Story Behind

- *Much like Thanjavur in Tamil Nadu, the town of **Bobbili in the Vizianagaram district** is renowned for producing high-quality veenas.*
- *The history of the Bobbili veena is intertwined with the patronage it received from kings of the princely state of Bobbili. **Mushinati Chinnayya Chari and Sarwasiddhi Appala Swamy**, who were the pioneers of making the Bobbili veena, brought special recognition to Bobbili with their exceptional craftsmanship and musical prowess.*
- *The kings of Bobbili, known for their love of music, actively encouraged artisans and musicians in their court.*
- *Bobbili veena got worldwide recognition when Veena was displayed at an exhibition held in New Delhi in 1919.*

Reasons for the decline

- **Lack of interest:** Younger generations are less interested in the instrument, and the rise of Western music has led to a decrease in demand.
- **Lack of patronage:** The government and the public have not provided the patronage needed to support the instrument's craftsmen.
- **Lack of raw materials:** There is a lack of raw materials, and the quality of the wood used to make the veena is also an issue.
- **Difficulty of learning:** The veena is one of the most difficult instruments to learn.
- **Academic pressure:** Children are bombarded with pop music and dance on television, and also face academic pressure.
- **Fixed price and quality:** There is no fixed price and quality for the handicraft.
- **Increasing use of Western instruments:** The increasing use of Western and electronic instruments has also contributed to the decline.

India-Bangladesh ties

Syllabus: GS-2: India – Bangladesh Bilateral relations.

Context:

- Prime Minister Sheikh Hasina secured a **historic fourth consecutive term** in Bangladesh.
- **The Awami League**, her party, won two-thirds of the seats in the January 7 national elections.

International Relations:

- Sheikh Hasina expressed gratitude to India, highlighting a close bilateral relationship.
- Indian Prime Minister Narendra Modi was among the first world leaders to congratulate Hasina.
- India views Bangladesh as a crucial ally in the region.

India's Strategic Interests:

- India aims to deepen its "**people-centric partnership**" with Bangladesh.
- This aligns with **India's 'Act East' policy** to counter China's influence in the Indo-Pacific.
- India stands to benefit from the Awami League's victory, given the **Opposition leader's criticism of positive ties with India.**

Foreign Policy Alignment:

- Hasina emphasizes **multilateral cooperation** with India.
- Positive rapport with PM Modi strengthens bilateral ties.
- Potential for **increased collaboration in traditional and new areas**.

Caution in Approach:

- India may approach cautiously due to **concerns over an 'unfair' election in Bangladesh**.
- Tense relations between **Dhaka and Washington**, along with increased alignment with Beijing, raise cautionary flags for India.

Historical Foundation of India-Bangladesh Relations:

- Rooted in common history, heritage, culture, and geographical proximity.
- Strengthened during the **1971 Bangladesh Liberation War**, where India provided crucial military support.

Post-Independence Challenges:

- Relations soured in the post-independence era due to military regimes and various issues, including **boundary disputes and insurgency**.
- **Anti-India sentiment** rose in the mid-1970s.

Positive Shift Under Sheikh Hasina's Leadership:

- Sheikh Hasina came to power in 1996 and improved bilateral ties.
- Key milestones include a treaty on the sharing of Ganga waters and subsequent measures.
- Ups and downs, but cooperation expanded in trade, energy, infrastructure, connectivity, defense, security, and science.

Mutual Cooperation and Diplomatic Initiatives:

- Significant visits, including Hasina's visit to India in 2010 and PM Manmohan Singh's historic tour to Dhaka in 2011.
- Duty-free access for Bangladesh products and a Framework for Cooperation pact strengthened trade partnership.
- Addressing security concerns, Hasina cracked down on anti-India groups, shut down terror camps, and handed over wanted terrorists to India.
- Stricter border controls implemented to curb illegal migration.

Momentum Under NDA Government (2014 onwards):

- *India and Bangladesh expanded their partnership during the NDA government's tenure.*
- *Resolved long-pending issues like the **land boundary agreement (LBA)** in 2015 and a maritime dispute.*

Recent Developments:

- *During Hasina's visit to India in September 2022, an agreement on sharing the waters of the **Kushiyara river** was signed.*
- *PM Modi termed this period a '**Shonali Adhyaya**' or golden chapter in diplomacy.*

Bilateral Trade Growth:

- *Bilateral trade between India and Bangladesh has steadily increased over the last decade.*
- *Bangladesh is now India's largest trade partner in South Asia.*

Trade Figures:

- *Bilateral trade reached \$18 billion in 2021-2022, rising from \$10.8 billion in 2020-21.*
- *A temporary dip to \$14.2 billion occurred in 2022-23 due to the impact of the COVID pandemic and the **Russia-Ukraine war**.*

Currency Use in Trade:

- *Reflecting growing trust, Bangladesh started using Indian rupees in trade transactions to reduce dependence on the U.S. dollar and strengthen regional currency.*

Importance of Political Stability:

- *Political stability is crucial for bilateral trade.*
- *Exports and imports were affected during the pre-election season in Bangladesh.*

Free Trade Agreement Discussions:

- *With the continuation of the previous regime in Bangladesh, discussions on a free trade agreement (FTA) between India and Bangladesh are set to proceed.*

Comprehensive Economic Partnership Agreement (CEPA):

- *In 2022, a joint feasibility study on a CEPA was successfully concluded.*
- *CEPA is expected to reduce or eliminate customs duties, simplify trade norms, and enhance economic opportunities.*

Challenges and Concerns:

- *Bangladesh is set to lose its **Least Developed Country (LDC)** status after 2026, impacting duty-free and quota-free market access in India.*
- ***Bangladesh aims to finalize an FTA with India** while pursuing the China-backed **Regional Comprehensive Economic Partnership (RCEP)**, posing concerns for India.*

Regional Trade Agreements:

- *Both countries are members of various regional trade agreements, including APTA, SAPTA, and SAFTA.*
- *Bangladesh is part of BIMSTEC, a regional organization in the Bay of Bengal region.*

Informal Trade and Border Haats:

- *More border haats are likely to be established to promote informal trade.*
- *Both countries see potential in weekly markets and express willingness to set up over 15 new haats on the border.*

India's Crucial Role in Economic Recovery:

- *India will play a crucial role in helping Bangladesh achieve its vision of attaining upper-middle-income status by 2031 as Prime Minister Hasina works on the country's economic recovery.*

Geopolitical Significance of Bangladesh:

- *Bangladesh plays a **crucial role in India's strategic plans**, being its immediate neighbor in the East.*
- ***The India-Bangladesh border** is the longest land boundary India shares with any of its neighbors, spanning 4,096 km and sharing 54 rivers.*

Connectivity Initiatives:

- *Under the leadership of PM Hasina, both countries have revived old railway links and initiated new projects to enhance bilateral and sub-regional connectivity.*
- *Projects align with India's vision to develop the Northeast and foster integration across South and Southeast Asia.*

Indian Investment and Lines of Credit:

- *India, as a major development partner, has invested in several infrastructure and connectivity projects in Bangladesh.*
- *Since 2010, India has extended Lines of Credits worth over \$7 billion to support various initiatives.*

Railway Connectivity:

- The **Akhaura-Agartala rail link**, inaugurated by PM Modi and Sheikh Hasina, connects Bangladesh and the northeast through Tripura, providing access to Chattogram and Mongla ports for cargo movement.
- The **Khulna-Mongla Port rail link** is another project funded by India.

Passenger Train Services:

- Three operational passenger train routes connect Kolkata with Dhaka (Maitree Express), Kolkata with Khulna (Bandhan Express), and New Jalpaiguri with Dhaka (Mitali Express).
- Cross-border bus services operate from Shillong, Agartala, and Kolkata to Dhaka.

Transport Connectivity Collaboration:

- India collaborates with Bangladesh to upgrade the **India-Bangladesh Protocol (IBP)** route and the **Protocol on Inland Water Transit and Trade (PIWT&T)** for cargo transport.
- The **BIMSTEC Master Plan for Transport Connectivity** focuses on connecting major projects in India, Bangladesh, Myanmar, and Thailand.

Trilateral Project and Energy Sector Collaboration:

- Bangladesh expresses eagerness to partner in the **India-Myanmar-Thailand trilateral project**, a 1,400-km highway linking India with Southeast Asia by land.
- In the energy sector, Bangladesh imports nearly 2,000 megawatts of electricity from India.
- Joint ventures, like the **Maitree Super Thermal Power Project**, contribute to energy collaboration.

Infrastructure Focus:

- India's attention is on the Matarbari Port, about 100 km from Tripura, being built with Japanese assistance.
- The port is seen as a "game changer," establishing a crucial industrial corridor linking Dhaka and the northeast of India.

Mosquitofish

Syllabus: GS-3: Biodiversity – invasive alien species.

Context:

- *Using mosquitofish to fight mosquitoes throws India a tougher puzzle.*

Mosquitofish Introduction:

- *Government and non-governmental organizations in Andhra Pradesh, Odisha, and Punjab released mosquitofish into local water bodies.*
- *Aimed at addressing a mosquito menace reported by locals.*

Background on Mosquito-Borne Diseases:

- **Global Changes:** *The world's climate and habitats have changed notably in the last century.*
- **Accelerated Spread:** *Changes have accelerated the spread of mosquito-borne diseases.*
- **Prevalence:** *These diseases are present in more than 150 countries, affecting over 500 million people worldwide.*

Mosquito-Borne Diseases in India:

- **Annual Cases:** *In India alone, around 40 million individuals contract mosquito-borne diseases every year.*
- **Persistent Concern:** *Mosquito-borne illnesses have been a persistent public health concern in India for many decades.*

What are Mosquitofish?

- *Mosquitofish refers to certain species, such as **Gambusia affinis** and **Gambusia holbrooki**, introduced into freshwater ecosystems to control mosquito larvae.*

Historical Context:

- **1960s:** *Biological control methods, like introducing mosquitofish, gained prominence as alternatives to chemical solutions for mosquito control.*
- **Alternatives to Pesticides:** *Introduced as a safer alternative to pesticides, which were found to have negative effects on human health and ecosystems.*
- **1980s-1990s:** *Increased adoption of these biological control methods.*

Environmental Impact:

- **Unintended Consequences:** *The mosquitofish, initially introduced as a control measure, began to proliferate beyond their original habitats.*

- **Global Spread:** Originally from the U.S., these mosquitofish species are now found globally.
- **Ecological Impact:** Notorious for **negatively impacting ecosystems** by displacing and preying on native fauna.
- **Extinction Risk:** Their presence can lead to the **extinction of native fish, amphibians, and various freshwater communities.**

Adaptability and Global Distribution:

- **Robust Adaptability:** Mosquitofish, particularly *Gambusia* species, are known for their adaptability and high tolerance for changing environmental conditions.
- **Widespread Distribution:** *Gambusia* stands out as one of the most widely dispersed freshwater fish globally.

Use of Mosquitofish in India:

- **Introduction during British Rule:** *Gambusia*, including the introduction of mosquitofish, **began in India in 1928 during British rule.**
- **Governmental Organizations Involved:** Various Indian organizations, including the Indian Council of Medical Research (ICMR), the National Institute of Malaria Research (NIMR), municipal corporations, Fisheries Department, Health Department, and private organizations, took part in efforts to combat malaria.

Current Status in India:

- Similar to the American experience, *Gambusia* (mosquitofish) has become widespread in India, **establishing self-sustaining populations in various habitats.**

Unintended Consequences:

- Despite good intentions, the introduction of mosquitofish in India led to **severe ecological and environmental problems.**
- Mosquitofish, especially *Gambusia* species, are considered among the hundred **most detrimental invasive alien species** by wildlife biologists and conservationists.
- **Mosquitofish are resilient**, with voracious feeding habits and aggressive behavior in introduced habitats.

Consequences in Other Countries:

- **Australia:** Introduced mosquitofish in Australia led to the local extinction of the red-finned blue-eye, an endemic fish species. They also preyed on the eggs and larvae of native fish and frogs.
- **New Zealand:** *Gambusia* posed a threat to native aquatic biodiversity.
- **India:** Reports indicate a decline in *Microhyla* tadpoles following the introduction of *Gambusia*.

NISAR Mission

Syllabus: GS-3: Science and Technology –Space.

Context:

- *The NASA-ISRO Synthetic Aperture Radar (NISAR) mission, designed to observe natural processes and changes in earth's complex ecosystems, is on track for an "early 2024" launch, a senior official at NASA's Jet Propulsion Laboratory (JPL) said on Sunday.*

NISAR Mission Overview:

- **Collaborative Initiative:** *NISAR (NASA-ISRO Synthetic Aperture Radar) is the outcome of a strategic partnership agreement signed in 2014 between the space agencies of the United States and India.*
- **Scheduled Launch:** *Anticipated to launch in January 2024, NISAR will embark on its mission from the Satish Dhawan Space Centre, ascending into a near-polar orbit.*
- **Operational Duration:** *The satellite is designed to be operational for a **minimum of three years**, contributing valuable data during its tenure in **Low Earth Orbit (LEO)**.*
- **Observation Capability:** *As a Low Earth Orbit (LEO) observatory, NISAR is poised to comprehensively map the entire globe within a 12-day cycle, offering a unique perspective on Earth's dynamic surface.*

Key Features:

- **Dual-Frequency Imaging:** *Weighing 2,800 kilograms, NISAR boasts both L-band and S-band Synthetic Aperture Radar (SAR) instruments, setting it apart as a dual-frequency imaging radar satellite.*
- **Collaborative Contributions:** *NASA's contributions include the **L-band radar, GPS, a high-capacity solid-state recorder** for data storage, and the payload data subsystem.*
- *Simultaneously, **ISRO has provided the S-band radar, the Geosynchronous Satellite Launch Vehicle (GSLV) launch system, and the spacecraft.***
- **S-Band Radar Details:** *Operating on a wavelength of 8-15 cm and a frequency of 2-4 GHz, the S-band radar offers versatility in near and far-range weather observation, characterized by its resilience to attenuation.*
- **Antenna Reflector:** *Featuring a 39-foot stationary antenna reflector crafted from a gold-plated wire mesh, NISAR utilizes this component to focus radar signals emitted and received by the upward-facing feed on the instrument structure.*

- **Synthetic Aperture Radar (SAR):** *Leveraging SAR technology, NISAR is poised to generate high-resolution images capable of penetrating clouds and collecting data day and night, irrespective of weather conditions.*
- **Duration of Utilization:** *NASA will utilize the L-band radar for global science operations for a minimum of three years, while ISRO is set to benefit from the S-band radar for a minimum period of five years, showcasing the collaborative mission's long-term impact.*

Expected Benefits of NISAR:

Earth Science Advancements:

- *NISAR is poised to deliver a vast array of data and insights into **Earth's surface changes, natural hazards, and disturbances within ecosystems.***
- *The mission contributes significantly to advancing our understanding of Earth system processes and enhances our comprehension of climate change dynamics.*

Disaster Management Support:

- **Critical Information:** *NISAR's data will play a pivotal role in supplying crucial information for managing natural disasters like earthquakes, tsunamis, and volcanic eruptions.*
- **Faster Response Times:** *The mission facilitates faster response times and more accurate risk assessments, aiding in proactive disaster management strategies.*

Agriculture Enhancement:

- **Improved Management:** *NISAR data will be instrumental in improving agriculture management practices by providing key information on crop growth, soil moisture levels, and changes in land use.*
- **Food Security:** *The mission's contributions are expected to bolster food security efforts by enabling informed decision-making in the agricultural sector.*

Infrastructure Monitoring and Management:

- **Comprehensive Data:** *NISAR will supply essential data for monitoring and managing critical infrastructure aspects, including monitoring of oil spills, urbanization trends, and deforestation activities.*
- **Environmental Impact Assessment:** *The mission's data is invaluable for conducting environmental impact assessments and implementing sustainable practices in infrastructure development.*

Climate Change Insights:

- **Monitoring and Understanding:** *NISAR's role in monitoring and understanding climate change impacts on Earth's land surface is crucial.*
- **Key Indicators:** *The mission will provide insights into melting glaciers, sea-level rise, and changes in carbon storage, serving as a vital tool in comprehending and addressing climate change challenges.*

Rabbit r1

Syllabus: GS-3: Science and Technology – IT.

Context:

- *The breakout star from the Consumer Electronics Conference or CES '24, Rabbit's pocket-sized AI gadget R1, has announced a partnership with Perplexity AI.*

Rabbit R1 Overview:

- *Rabbit R1 is not a smartphone but an AI-powered personal assistant.*
- *Debuted at CES 2024, priced at US\$199, and designed in collaboration with Teenage Engineering.*
- *Features a walkie-talkie-like square shape with a vibrant orange color for a retro aesthetic.*
- *Compact size, approximately half the size of an iPhone 15, and lightweight.*

Operation and Connectivity:

- *Does not replace smartphones but connects to smartphone apps.*
- *Relies on Rabbit OS and a "Large Action Model" (LAM) for versatile app control.*
- *Customizable interactions through a dedicated training mode.*
- *Aims to provide a less distracting digital experience.*

Rabbit OS and AI Technology:

- *Rabbit OS utilizes LAM for a universal controller across various apps and platforms.*
- *LAM allows for tailored interactions and memory function, critical for user-centric design.*
- *The device is adaptable and can learn from and interact with new applications.*

Functionality:

- *Similar to popular devices like Alexa or Google Assistant.*
- *Manages tasks such as playing music, ordering a car, buying groceries, and more.*

- *Displays category-based cards on the interface for different functions.*

Integration with Existing Apps:

- *Trained the LAM through direct human interaction with popular apps like Spotify and Uber.*
- *Avoids the need for numerous APIs and developer support.*

Practical Applications:

- *Training mode allows users to teach the device specific tasks.*
- *Example: Removal of watermarks in Photoshop, learned in 30 seconds and applied autonomously in future tasks.*