



DAILY CURRENT AFFAIRS 18-01-2025

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Santa Ana Wind

Syllabus: GS-1; Geography, GS-3; Natural Disasters, Climate Change

Context

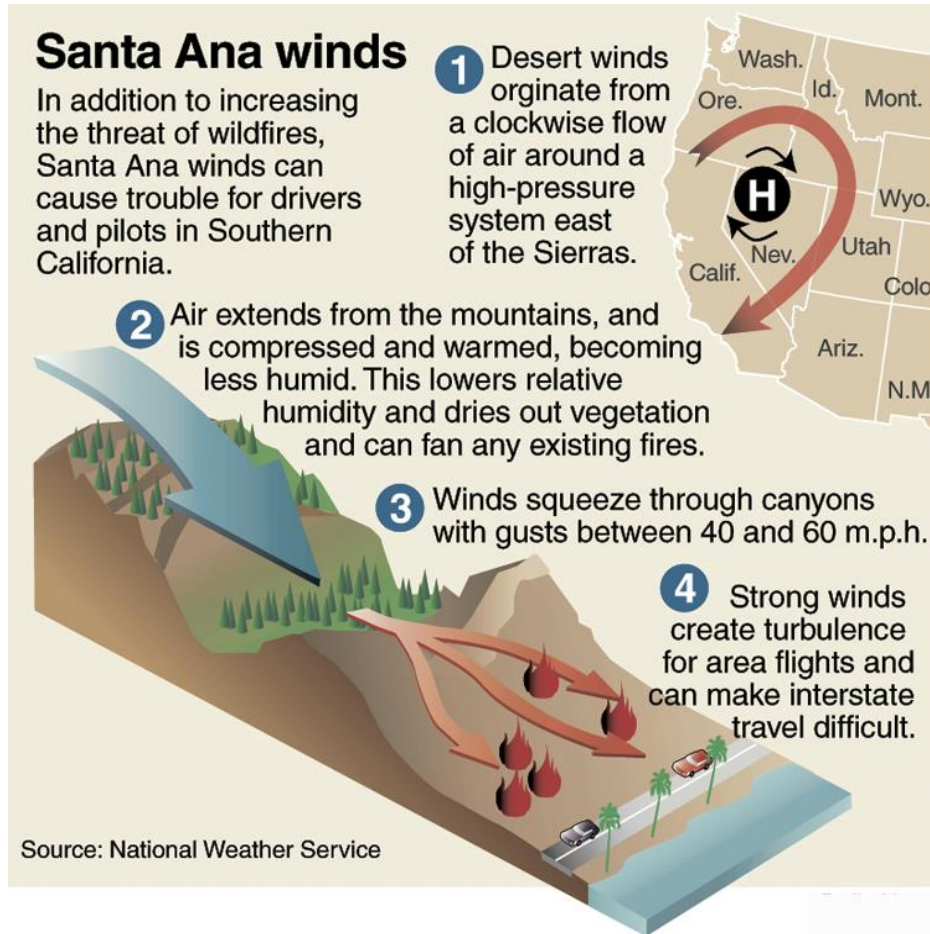
- Millions of Southern Californians were on edge as winds began picking up during a final round of dangerous fire weather forecast for the region where two massive blazes have killed at least 25 and destroyed thousands of homes.

What are Santa Ana Winds?

- The **Santa Ana winds** are strong, dry winds that occur in Southern California, particularly in the **Los Angeles** and **San Bernardino** areas.
- They typically occur during the fall and winter months (from **October to March**).
- These winds are hot, dry, and often strong, with speeds exceeding 40 mph (64 km/h) and gusts up to 80 mph (128 km/h).
- The winds are created when air moves from the high-pressure systems in the Great Basin, east of California, to lower-pressure areas over the coast.
- The air is funneled through mountain passes, which intensifies the winds and causes them to warm as they descend towards the coastal areas.

Meteorological Mechanism

- **High-Pressure Systems:** The winds are driven by high-pressure systems over the Great Basin (inland area) and low-pressure systems along the coast.
- **Compression and Warming:** As air flows down the mountain slopes towards lower altitudes, it undergoes compression, which leads to a warming of the air. This dry, warm air accelerates as it moves through the narrow mountain passes.
- **Foehn Effect:** The warming and drying of air are a result of the **Foehn effect**, where the air's moisture content is reduced as it passes over mountains, causing the air to heat up.



Environmental Impact

- **Drought and Wildfires:** The dry winds can contribute to drought conditions and make wildfires more intense and harder to control. Santa Ana winds increase the risk of **wildfires** in Southern California by drying out vegetation and spreading flames quickly.
- **Air Quality:** These winds can carry dust, pollutants, and particulate matter, negatively affecting air quality. They may cause respiratory problems and contribute to smog formation in urban areas.
- **Agricultural Effects:** The drying effect of the winds can also harm agriculture by depleting soil moisture and stressing crops.

Impacts on Human Life

- **Wildfire Risk:** The winds are notorious for exacerbating the spread of wildfires in California. Some of the most destructive fires in the region have been associated with Santa Ana winds.

- **Health Hazards:** The winds can cause dust storms, leading to respiratory problems. The dry air also exacerbates the risk of heatstroke and dehydration.
- **Power Outages:** The winds can bring down power lines, leading to outages.
- **Damage to Infrastructure:** Strong winds can cause property damage, including uprooting trees, damaging roofs, and breaking windows.

Austria

Syllabus: GS-1; Geography- Mapping

Context

- Austria teeters on the brink of forming its first far-right-led government since World War II.



Geography:

- **Capital:** Vienna
- **Area:** 83,879 km²

- **Location:** Austria is a landlocked country bordered by Germany to the north, Czech Republic and Slovakia to the east, Hungary to the southeast, Slovenia and Italy to the south, and Switzerland and Liechtenstein to the west.
- **Climate:** Austria has a continental climate with cold winters and warm summers. The climate varies depending on altitude, with mountain regions experiencing cooler temperatures.

Political Structure:

- **Government Type:** Federal Republic
- **Head of State:** President (elected every six years)
- **Head of Government:** Chancellor (appointed by the President, leader of the largest party in the National Council)
- **Parliament:** Bicameral – National Council (lower house) and Federal Council (upper house)
- **States (Bundesländer):** Austria is divided into 9 states (Bundesländer), each with its own government and constitution.
- **International Organizations:** Austria is a member of the United Nations, the European Union, the Schengen Area, the Eurozone, and the Organization for Security and Cooperation in Europe (OSCE).

History:

- Austria has a long history, with its roots dating back to the Roman Empire. It was part of the Holy Roman Empire and later became the Austrian Empire (1804–1867) and the Austro-Hungarian Empire until its dissolution in 1918 after World War I.
- After World War II, Austria was divided into four zones controlled by the Allies, but it regained independence in 1955 with the signing of the Austrian State Treaty.
- **Neutrality:** Austria has maintained a policy of neutrality since 1955, meaning it does not participate in military alliances or conflicts.

Economy:

- **Economic System:** Social Market Economy
- **GDP:** Austria has a highly developed and diverse economy, with services (especially tourism, banking, and insurance) contributing significantly. Industry, including manufacturing (such as machinery, vehicles, and chemicals), plays a crucial role.
- **Currency:** Euro (€)
- **Main Industries:** Automotive, machinery, chemicals, tourism, steel, and banking.

- **Key Sectors:** Energy (hydroelectric power), agriculture (especially dairy products), and forestry.

Culture:

- **Language:** German (official), with various regional dialects and minority languages (e.g., Hungarian, Slovenian, and Czech).
- **Religion:** Roman Catholicism (majority), with Protestantism and Islam as minority religions.
- **Cultural Heritage:** Austria is known for its contributions to classical music, with famous composers like Wolfgang Amadeus Mozart, Ludwig van Beethoven, and Johann Strauss. Vienna is considered one of the world's leading music capitals.
- **UNESCO World Heritage Sites:** Austria has several UNESCO-listed sites, including the Historic Centre of Vienna, the Schönbrunn Palace, and the Hallstatt-Dachstein region.

Foreign Relations:

- **European Union:** Austria is a member of the EU, contributing to European integration and policy-making, especially in economic and environmental areas.
- **Neutrality:** Austria follows a policy of permanent neutrality, and this is enshrined in its constitution. Austria does not participate in NATO and is not part of any military alliance.
- **UN Peacekeeping:** Austria has been actively involved in UN peacekeeping missions and provides troops and support for humanitarian aid efforts.

Reserve Bank of India's Financial Stability Report

Syllabus: GS-3: Indian Economy – RBI reports.

Context:

- The RBI's Financial Stability Report reflects the collective assessment of the Financial Stability and Development Council (FSDC) Subcommittee on the resilience of India's financial system and risks to financial stability.

1. Global Macro-Financial Development & Outlook

- **Global Growth Trends:**
 - Steady global growth with risks tilted to the downside.

- Positives: Strong growth in the US and stable outlook in Emerging Markets and Developing Economies (EMDEs).
- Global battle against inflation subsiding without recession risks.

➤ **Downside Risks:**

- Geopolitical tensions, trade uncertainties post-major global elections.
- Potential tightening of financial conditions.

2. Global Macro-Financial Risks

➤ **Public Debt:**

- Projected to exceed \$100 trillion by 2024 (93% of global GDP).
- US and China are the primary contributors.

➤ **Asset Valuations:**

- Equity markets rally stretching valuations with high price-to-earnings (P/E) ratios.

3. Domestic Growth and Inflation

➤ **GDP Growth:**

- Real GDP growth (y-o-y) moderated to 6.0% in H1:2024-25 from 8.2% in H1:2023-24.
- Recovery expected in Q3 and Q4, supported by:
 - Public consumption and investment.
 - Strong service exports.
 - Easy financial conditions.

➤ **Risks:**

- Softness in manufacturing and urban demand.
- Global spillovers and protective trade policies.

4. Corporate Sector

➤ **Performance of Non-Financial Companies (NFCs):**

- Sales growth stable at 6.2% (H1:2024-25).
- Manufacturing sector sales growth unchanged at 4.9%.
- IT and non-IT services sector sales rose by 5.7% and 9.6%, respectively.

5. Government Finance

➤ Fiscal Management:

- Commitment to fiscal consolidation.
- Capital expenditure contracted by ~35% in Q1:2024-25 due to the election Model Code of Conduct.
- Central government debt-to-GDP ratio moderated to 56.8% (2024-25 BE).

6. Banking Stability Indicator (BSI)

➤ Key Observations:

- BSI improved further during H1:2024-25.
- Slowdown in retail loans and NBFC lending:
 - Retail lending growth reduced from 27% to 15.6% (2021–2024).
 - GNPA ratio of banks at 1.2% (September 2024).
- Concerns: Rising write-offs, especially in private banks.

7. Non-Banking Financial Companies (NBFCs)

- Loan growth moderated to 6.5% (H1:2024-25).
- Impact of increased risk weights on NBFC loans.
- Upper-layer NBFCs: Retail lending dominates (63.8%).
- Middle-layer NBFCs: Robust growth in retail portfolios.

8. Microfinance

- Rising delinquencies across ticket sizes and lenders.
- Stressed assets increased to 4.3% in September 2024 (from 2.15% in March 2024).

9. Scheduled Commercial Banks (SCBs)

- Strong profitability, declining NPAs, and adequate capital buffers.
- GNPA ratio at multi-year lows.
- Return on Assets (RoA) and Return on Equity (RoE) at decadal highs.

10. Mutual Funds

- Robust growth in 2024-25:
 - Assets Under Management (AUM) rose by 38.8% (y-o-y).
 - Equity schemes, especially sectoral/thematic, driving growth.

11. Insurance Sector

➤ Solvency Ratio:

- Minimum requirement: 150% (set by IRDAI).
- Higher solvency ratios indicate resilience to future uncertainties.

Conclusion

- The RBI's report highlights global and domestic challenges and risks.
- India's financial system shows resilience with improved stability indicators, moderated public debt, and robust mutual fund growth.

What is Financial Stability Report?

The FSR is a biannual publication by the RBI. It reflects the collective assessment of the Sub-Committee of the Financial Stability and Development Council (FSDC), which is headed by the Governor of the RBI. The report evaluates the resilience of the Indian financial system and identifies risks to financial stability.

National Bureau of Fish Genetic Resources (NBFGR)

Syllabus: GS-3: Indian Economy - Skill development and employment

Context:

- Around 100 tribal persons of Pulicat region will undergo intense training in pearl spot culture, crab fattening clownfish aquaculture.

Tribal Development through Aquaculture Training

Training Initiative for Pulicat Tribals

- **Objective:** Intense training in pearl spot culture, crab fattening, and clownfish aquaculture.
- **Organizers:**
 - **National Bureau of Fish Genetic Resources (NBFGR):** Provides technology and training.
 - **Department of Tribal Welfare:** Collaborates with NBFGR to support tribal livelihoods.

➤ **Beneficiaries:**

- 100 tribal persons from Pulicat region, selected and divided into three groups based on interest.
- High participation of women (part of 155 tribal attendees from Chenchi Amman Nagar).

Ainthinai - Cluster Approach for Tribal Development

- **State Initiative:** Aimed at empowering tribal communities through focused development programmes.
- **Technology Dissemination Programme:**
 - Conducted on Sunday for 155 tribal individuals.
 - Demonstrations by scientists from the Centre for Peninsular Aquatic Genetic Resources (Regional Center of NBFGR, Kochi).

Community Aquaculture Units

- **Establishment:**
 - Post-training, beneficiaries will establish aquaculture units for:
 - Clownfish rearing.
 - Crab fattening.
 - Pearl spot culture.
- **Support System:**
 - **NBFGR:** Offers technology and hands-on training.
 - **Tribal Welfare Department:** Sponsors infrastructure like rearing ponds and units.

Role of NBFGR (Under ICAR)

- **Aquatic Germplasm Preservation:**
 - Focus on sustainable use of waterbody resources.
 - Livelihood promotion for inland and coastal regions.
- **Key Functions:**
 - Technology development for aquaculture.
 - Training for community-based aquaculture practices.

Importance for UPSC Topics

- **Social Justice:** Tribal welfare and livelihood promotion through skill development.

- **Science & Technology:** Application of aquaculture technologies for sustainable livelihoods.
- **Government Initiatives:** Role of cluster approach ('Ainthinai') in empowering marginalized communities.
- **Environment & Ecology:** Conservation and sustainable use of aquatic resources.

National Bureau of Fish Genetic Resources (NBFGR) - Brief Notes for UPSC

Overview:

- Established in **1983** under the Indian Council of Agricultural Research (ICAR).
- Headquartered in **Lucknow, Uttar Pradesh**.
- Primary mandate: **Conservation, evaluation, and cataloging of fish genetic resources** in India.

Key Objectives:

- **Collection and Cataloging:**
 - Identify and document genetic resources of fish species in Indian waters.
- **Conservation:**
 - Develop strategies for in situ (natural habitat) and ex situ (controlled environment) conservation.
- **Research and Development:**
 - Conduct studies on fish genetics, genomics, and breeding.
 - Enhance sustainable aquaculture production.
- **Biosecurity:**
 - Protect indigenous fish species from invasive species and diseases.
 - Serve as the nodal center for quarantine services for exotic fish species.
- **Capacity Building:**
 - Offer training programs for fisheries professionals and stakeholders.

Significance:

- Preserves biodiversity and ensures **sustainable utilization** of fish genetic resources.
- Supports the **Blue Revolution** by enhancing aquaculture productivity.
- Promotes conservation of endangered and endemic fish species.

Key Achievements:

- Developed a **National Fish Repository** to catalog species.
- Introduced fish germplasm resource banks for conservation.
- Contributed to the prevention of fish diseases through biosecurity measures.
- Linked to sustainable development goals (SDG 14: Life Below Water).

First Private Satellite Constellation

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

Context:

- **What it is:** A constellation of six hyperspectral imaging satellites launched by Bengaluru-based space-tech startup Pixxel, backed by Google.
- **Launch Partner:** Collaboration with **SpaceX**, which facilitated the launch.
- **Launch Site:** **Vandenberg Space Force Base**, California, USA.

Objectives:

The constellation aims to provide high-resolution **hyperspectral imaging** to revolutionize insights across various sectors:

- **Agriculture:** Enhancing crop yield and health monitoring.
- **Mining:** Optimizing resource extraction and management.
- **Environmental Monitoring:** Detecting oil spills, deforestation, and pollution.
- **Defense:** Supporting strategic surveillance.
- **Resource Management:** Improving geographic and boundary surveys.

Features:

- **Hyperspectral Imaging Technology:** Captures detailed data across hundreds of light bands, offering **unmatched precision** over traditional imaging.
- **Applications:**
 - Identifying subtle changes in vegetation, soil, and water bodies.
 - Monitoring and managing natural disasters.

- Conducting boundary and land-use surveys with high accuracy.



Future Plans:

- Expand the constellation with **18 additional satellites by 2029** to enhance global imaging capabilities.

Clients and Collaboration:

- Pixxel has already secured **65 clients**, including:
 - **British Petroleum (BP)** for resource optimization.
 - **India's Ministry of Agriculture**, leveraging imaging data for agricultural advancements.