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**DAILY CURRENT AFFAIRS 03-08-2024**

**GS-2**

1. QUAD
2. India -China relations

**GS-3**

3. Natural Farming
4. Dementia
5. What is Wing stall?

## **QUAD**

### **Syllabus: GS-2; International Institutions**

#### **Context**

- *The Quad foreign ministers met in Tokyo shortly after a large number of foreign ministers gathered in Vientiane, Laos, for the ASEAN Regional Forum and the East Asia Summit.*

#### **About**

- **QUAD, or the Quadrilateral Security Dialogue, is an informal strategic forum comprising India, Japan, Australia, and the United States.**
- *It aims to ensure and support a free, open, and prosperous Indo-Pacific region.*

#### **Formation**

- **Origin:** *The concept was first proposed by Japanese Prime Minister Shinzo Abe in 2007, but initial efforts were unsuccessful due to Chinese pressure.*
- **Revival:** *The group was revived in 2017 with all four members coming together.*

#### **Objectives**

- *Maintaining a free, open, and inclusive Indo-Pacific region.*
- *Promoting maritime security and cooperation.*
- *Enhancing economic cooperation and connectivity.*
- *Countering China's growing influence in the region.*

#### **Significance of QUAD**

- **Geopolitical Importance:** *QUAD is seen as a counterbalance to China's increasing assertiveness in the Indo-Pacific.*
- **Economic Cooperation:** *The group focuses on infrastructure development, supply chain resilience, and technological cooperation.*
- **Security Cooperation:** *Members conduct joint military exercises and information sharing to enhance maritime security.*
- **Democratic Values:** *All four countries share democratic values and a commitment to multilateralism.*

#### **Challenges and Prospects**

- **Balancing Act:** *QUAD members must carefully balance their relations with China while maintaining the group's cohesion.*
- **Diverse Interests:** *The four countries have different priorities and foreign policy objectives.*

- **China Factor:** *China's growing economic and military power poses a significant challenge to QUAD's goals.*
- **Potential:** *QUAD has the potential to become a major force for stability and prosperity in the Indo-Pacific region.*

## **India -China relations**

**Syllabus: GS-3: Bilateral relations**

**Context:**

- *India, China hold 30th round of border talks.*

**Background:**

- **1950s - 1960s: Early Cooperation and Conflict**
  - **Panchsheel Agreement (1954):** *Agreement on peaceful coexistence.*
  - **Sino-Indian War (1962):** *Border conflict primarily over Aksai Chin and NEFA (North-East Frontier Agency). Resulted in a significant shift in relations.*
- **1970s - 1980s: Attempts at Normalization**
  - **Normalization Efforts:** *Beginning of dialogue to resolve border disputes.*
  - **1976 Agreement:** *Agreement on maintaining peace and tranquility along the Line of Actual Control (LAC).*
- **1990s - 2000s: Growing Economic and Strategic Relations**
  - **Economic Cooperation:** *Liberalization of economies led to increased trade and investment.*
  - **Strategic Partnership (2005):** *Declaration of a Strategic and Cooperative Partnership for Peace and Prosperity.*
- **2010s - Present: Friction and Diplomacy**
  - **Border Tensions:** *Several incidents, including the 2017 Doklam standoff and the 2020 Galwan Valley clash.*
  - **Bilateral Agreements:** *Efforts to manage disputes through dialogues and agreements, such as the 2012 agreement on maintaining peace and tranquility.*

**Key Issues in India-China Relations**

➤ **Border Disputes:**

- **Aksai Chin:** *Claimed by India as part of Ladakh but controlled by China.*
- **Arunachal Pradesh:** *Claimed by China as South Tibet. The Line of Actual Control (LAC) is not demarcated, leading to frequent stand-offs.*

➤ **Strategic and Military Competition:**

- **Military Build-Up:** *Both countries have been enhancing their military presence along the border.*
- **Regional Influence:** *Competition for influence in South Asia, including China's Belt and Road Initiative (BRI) and India's strategic partnerships with countries in the region.*

➤ **Economic Relations:**

- **Trade:** *Significant economic ties with China being one of India's largest trading partners. However, trade imbalances and issues such as market access and intellectual property rights are contentious.*
- **Investment:** *Growing Chinese investments in Indian infrastructure and technology sectors, though these face scrutiny due to national security concerns.*

➤ **Geopolitical Issues:**

- **South China Sea:** *India's stance on freedom of navigation in international waters contrasts with China's claims in the South China Sea.*
- **Quad Group:** *India's participation in the Quadrilateral Security Dialogue (Quad) with the US, Japan, and Australia, seen as a counterbalance to China's growing influence in the Indo-Pacific region.*

## **Diplomatic and Engagement Strategies**

➤ **Dialogue Mechanisms:**

- **Special Representatives:** *Mechanism to address boundary issues and maintain peace along the LAC.*
- **Annual Summits:** *High-level meetings between leaders to address bilateral issues and enhance cooperation.*

➤ **Economic and Cultural Exchanges:**

- **Trade and Investment:** *Encouragement of economic collaboration to benefit both nations.*
- **People-to-People Ties:** *Promotion of cultural exchanges, tourism, and academic collaboration to foster mutual understanding.*

## Recent Developments

- **Border Standoffs:** *The 2020 Galwan Valley clash highlighted the fragile nature of border peace. Both nations have engaged in diplomatic dialogues to de-escalate tensions.*
- **Strategic Alliances:** *Increased cooperation with the US and other Western nations as part of India's strategy to counterbalance China's influence.*
- **Global Issues:** *Collaboration on global issues such as climate change, though tensions remain on strategic and regional matters.*

## Future Outlook

- **Managing Tensions:** *Continued efforts to manage border tensions and avoid military confrontations through diplomatic channels.*
- **Economic Cooperation:** *Potential for enhanced economic ties, provided both countries address trade imbalances and market access issues.*
- **Regional Security:** *Cooperation in regional security matters while balancing strategic interests in the Indo-Pacific and beyond.*

## Practice Question

*Q. Analyze the impact of recent border tensions between India and China on their strategic relations and economic cooperation, considering both immediate and long-term implications. (15 marks, 250 words)*

## Natural Farming

## Syllabus: GS-3: Indian Agriculture – Farming systems and types.

### Context:

- Recently, *The Hindu* Published an article titled 'Should India focus on natural farming?'.

### Background:

#### Budget Announcement (2024-25):

- **Initiative:** Union Finance Minister Nirmala Sitharaman announced a plan to initiate one crore farmers into natural farming over the next two years.
- **Support:** Certification, branding, and establishment of 10,000 bio-input resource centers.
- **Implementation:** Through scientific institutions and gram panchayats.

### Mission Objective

- **National Mission on Natural Farming (NMNF):**
  - **Goal:** Motivate farmers to transition from chemical-based farming to natural farming.
  - **Strategy:** Emphasize the merits of natural farming to induce a voluntary shift.
  - **Budget:** ₹4,645.69 crore allocated for six years (2019-20 to 2024-25).

### What is Natural Farming?

- **Principles:**
  - **No Chemical Inputs:** Excludes chemical fertilizers and pesticides.
  - **Traditional Practices:** Focuses on on-farm biomass recycling, biomass mulching, cow dung-urine formulations, and botanical pest management.
  - **Soil Health:** Emphasis on improving natural nutrient cycling and increasing organic matter.
  - **Agro-Ecology:** Integrates crops, trees, and livestock to optimize biodiversity.
- **Benefits:**
  - **Income:** Potential to enhance farmers' income.
  - **Soil and Environment:** Restoration of soil fertility, environmental health, and reduction in greenhouse gas emissions.

## Challenges and Concerns

- **Expert Opinions:**
  - **Food Security:** *Concerns about the ability to meet food demands in a populous country like India.*
  - **Study Findings:**
    - **CESS vs. ICAR-IIFSR Studies:**
      - **CESS:** *Positive outcomes with improved yields and incomes using ZBNF (Zero Budget Natural Farming).*
      - **ICAR-IIFSR:** *Noted a 59% decline in wheat yields and a 32% decline in basmati rice yields under ZBNF, raising concerns about sustainability and productivity.*

## Lessons from Sri Lanka

- **Background:** *Sri Lanka's complete shift to organic farming led to economic and political turmoil.*
- **Consequences:**
  - **Reduced Yields:** *Decrease in key crop yields, including rice.*
  - **Economic Impact:** *Price escalation, food security issues, and public unrest.*

## Way Forward

- **Expert Recommendations:**
  - **Localized Benefits:** *Natural farming could be effective on a smaller scale but may not be viable nationwide.*
  - **Scientific Testing:** *Rigorous studies on crop yields and food security are crucial before large-scale implementation.*
  - **Supplementary Food:** *Potential for natural farming to be used for non-staple crops.*

## Dementia

### Syllabus: GS-3; General Science

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## Context

- Treating failing eyesight and high cholesterol are two new ways to lower the risk of dementia developing, a major report suggests.
- Scientists have now identified 14 health issues which, if reduced or eliminated, could theoretically prevent nearly half of dementias in the world.
- Middle-aged people and poorer countries have most to gain from targeting these risk factors, says the **Lancet Commission's latest report** on the topic.

## About

- Dementia is a general term for a decline in **mental ability** severe enough to **interfere with daily life**.
- It is not a specific disease but rather a general term for the symptoms associated with a number of **diseases that affect the brain**.

## Characteristics:

- Loss of memory
- Difficulty communicating and understanding
- Inability to focus and pay attention
- Changes in mood and behavior
- Problems with reasoning and judgment

## Types of Dementia

- **Alzheimer's disease:** The most common type, characterized by the gradual deterioration of memory and cognitive functions.
- **Vascular Dementia:** Caused by damage to blood vessels in the brain, often linked to stroke.
- **Lewy Body Dementia:** Involves abnormal protein deposits in the brain, leading to fluctuations in cognition, visual hallucinations, and movement difficulties.
- **Frontotemporal Dementia:** Impacts the frontal and temporal lobes, resulting in changes in personality, behavior, and language.
- **Mixed Dementia:** A combination of two or more types of dementia.

## Causes and Risk Factors

- **Age:** The most significant risk factor.
- **Genetics:** A family history of dementia increases the risk.
- **Lifestyle factors:** Smoking, excessive alcohol consumption, and unhealthy diet can contribute.
- **Medical conditions:** Heart disease, high blood pressure, and diabetes can increase the risk.

- **Head injuries:** *Repeated head trauma can be a factor.*

### **Impact of Dementia**

- **Individual:** *Dementia can lead to a significant decline in quality of life, loss of independence, and emotional distress for both the patient and caregivers.*
- **Societal:** *The increasing prevalence of dementia poses a significant economic burden on healthcare systems, and there is a growing need for support services and research.*

### **Challenges in Dementia Care**

- **Early Diagnosis:** *Early detection is crucial for effective management, but it can be challenging due to the gradual onset of symptoms.*
- **Caregiver Burden:** *Caregivers often face physical, emotional, and financial strain.*
- **Lack of Cure:** *Currently, there is no cure for dementia, although treatments can help manage symptoms.*
- **Social Stigma:** *Dementia is often associated with stigma, which can hinder support and understanding.*

### **Government Initiatives and Policy Implications**

- **National Dementia Policy:** *Many countries have developed national policies to address the challenges posed by dementia, including early diagnosis, care services, research, and awareness campaigns.*
- **Healthcare Expenditure:** *Dementia places a significant burden on healthcare systems, requiring increased investment in research and care facilities.*
- **Social Security:** *Adequate social security measures are essential to support individuals with dementia and their caregivers.*
- **Public Awareness:** *Raising awareness about dementia is crucial for early detection and reducing stigma.*

## **What is Wing stall?**

**Syllabus: GS-3: Science and Technology – Aircraft.**

**Context:**

- *Was the recent Kathmandu plane crash caused by a 'wing stall'?*

## Wing Stall

- A wing stall occurs when one wing experiences a loss of lift before the other. This can cause the aircraft to roll into an excessive bank.

### Mechanism:

- **Lift Loss:** A stall happens when the wings no longer generate sufficient lift. In a wing stall, one wing stalls first, leading to an imbalance in lift.
- **Aileron Ineffectiveness:** During a stall, ailerons become ineffective because they rely on the airflow over the wings to function properly.

### Recovery Method:

- **Push the Nose Down:** Reducing the angle of attack helps to restore lift.
- **Apply Opposite Rudder:** Use the rudder to counteract the direction of the dropped wing.
- **Keep Ailerons Neutral:** Avoid using ailerons as they are ineffective during a stall.
- **Add Power:** Increasing engine power can help to recover from the stall and regain control.

## Unusual Attitudes

Unusual attitudes refer to the aircraft's abnormal position relative to the Earth's horizon. These include:

- **Excessive Nose-High Attitude:** The aircraft's nose is pointed significantly above the horizon.
- **Steep Dives:** The aircraft is descending at a very steep angle.
- **Excessive Rolls:** The aircraft is rolling beyond normal limits, which may be to the right or left.

## Implications:

- **Stall Risk:** Unusual attitudes can lead to aerodynamic stalls if not corrected promptly.

