DAILY CURRENT AFFAIRS 13-09-2024

GS-1

1. Mission Mausam

GS-2

2. Siddha Drugs

3. QUAD

GS-3

4. Universal Basic Income

5. Cholera

Mission Mausam

Syllabus: GS-1; Geography, GS-2; Government policies and Interventions

Context:

➢ **Mission Mausam**, *which was approved by the* **Union Cabinet on 11ᵗʰ September 2024,** *is aimed at improving India's weather forecasting capabilities, by upgrading the weather monitoring infrastructure, investing in scientific research, and improving the skills of the scientists.*

About Mission Mausam

➢ **Objective**: *To improve weather forecasting and develop capabilities for weather management.*

➢ **Focus**:

  o *Shift from mere weather forecasting to* **weather management**.

  o *Enable intervention in weather events such as enhancing or suppressing rainfall.*

Key Features of Mission Mausam

➢ **Weather Management**:

  o **Managing Rainfall**:

    ▪ *Suppressing rainfall in areas experiencing incessant rains to prevent floods.*

    ▪ *Enhancing rainfall in regions with deficient precipitation through cloud-seeding.*

  o **Future Expansion**:

    ▪ *Potential to manage other weather events like* **lightning**.

➢ **Cloud Seeding**:

  o *Tried in various countries, including India, with* **varying success rates**.

  o *Aim to develop* **reliable rainfall management capabilities** *within the next five years.*

Implementation and Infrastructure Upgradation

➢ **Time Frame**: *Implemented over a five-year period.*

➢ **Budget**: *Rs 2,000 crore for the first two years. Further allocations to be decided later.*

- ➢ **Infrastructure Enhancement***:*
  - o **Intensified Weather Observation Network***:*
    - ▪ *Focus not only on land but also on sea and sky.*
    - ▪ *Helps improve accuracy in weather models and contributes to climate science studies.*
  - o **Technological Upgradation***:*
    - ▪ *Increase in* **doppler radars***,* **wind profilers***,* **radiometers***, and* **radio sonde** *over the next 18 months.*
    - ▪ *These tools are essential for recording data across land, atmosphere, and oceans.*

Expected Outcomes

- ➢ **Enhanced Weather Forecasting***:*
  - o *Improved accuracy in weather predictions.*
  - o *Better understanding of climate science due to enhanced observational network.*
- ➢ **Long-term Goals***:*
  - o **Weather Management Capabilities***: IMD hopes to achieve reliable control over rainfall and other weather events within five years.*

Siddha Drugs

Syllabus: GS-2; Health

Context

Study Claims 'Siddha' Drug Combination Can Reduce Anaemia In Girls

About

- ➢ *Siddha Medicine is one of the oldest systems of medicine originating from India, particularly from Tamil Nadu. It is part of India's traditional medical systems and is recognized by the Ministry of* **AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy).**

Historical Background

- ➢ *Siddha system is believed to have been developed by the ancient* **Tamil sages known as "Siddhars."**
- ➢ *Siddhars were renowned for their knowledge of medicinal herbs, minerals, and spirituality.*
- ➢ *Agastya, one of the 18 Siddhars, is considered the father of Siddha medicine.*

Philosophy

- ➢ *Based on the theory of the five elements:* **Earth, Water, Fire, Air, and Space,** *which constitute the human body.*
- ➢ *Focuses on balancing the three humors or "doshas" (Vatham, Pitham, and Kapham).*
- ➢ *Health is maintained by balancing these doshas, and disease occurs due to imbalance.*

Types of Drugs

Siddha medicine employs both herbal and mineral drugs.

- ➢ **Herbal Drugs:** *Derived from plants, leaves, fruits, seeds, and bark. Herbs like neem, turmeric, amla, and ashwagandha are commonly used.*
- ➢ **Mineral Drugs:** *Includes metals, salts, and minerals like mercury, arsenic, gold, silver, etc. They undergo purification processes to make them safe for consumption.*
- ➢ **Animal Products:** *Some Siddha formulations also incorporate animal products like shells, horns, and animal bones.*

Popular Siddha Drugs

- ➢ *Thuthuvalai Rasayanam (for respiratory issues)*
- ➢ *Nilavembu Kudineer (for fever and immune boosting, notably used during the dengue fever outbreak)*
- ➢ *Vallarai Legiyam (for memory and brain function)*
- ➢ *Karisalai Legiyam (for liver-related ailments)*

Principles of Treatment

- ➢ **Dietary regulations:** *A significant part of the Siddha treatment involves dietary adjustments.*
- ➢ **Lifestyle changes:** *Focus on yoga, meditation, and purification processes.*
- ➢ **Prevention is better than cure:** *Siddha places great emphasis on preventing diseases through a balanced lifestyle and diet.*

Usage in Modern Times

➢ *Siddha medicine has gained recognition for its efficacy in treating chronic illnesses like arthritis, skin diseases, digestive disorders, and respiratory problems.*

➢ *It is also used for treating lifestyle diseases such as diabetes, hypertension, and stress-related issues.*

Research and Standardization

➢ **The Central Council for Research in Siddha (CCRS)** *under the Ministry of AYUSH conducts research to standardize Siddha medicines.*

➢ *Efforts are being made to scientifically validate the therapeutic benefits of Siddha drugs.*

Legal and Institutional Framework

➢ *The Government of India has established Siddha hospitals and research centers.*

➢ *National Institute of Siddha (Chennai) is a premier institute offering education and research in Siddha medicine.*

Challenges

➢ *The use of heavy metals in some preparations has led to concerns about toxicity, though proper purification processes mitigate this risk.*

➢ *Need for more scientific studies and clinical trials to validate the efficacy and safety of Siddha drugs.*

QUAD

Syllabus: GS-2: International Relations.

Context:

➢ *The United States will host the leaders of Australia, India and Japan for a meeting of the* **Quad on September 21,** *according to a release from the White House.*

Significance of the summit:

➢ *Reflects* **strong personal relationships** *between President Biden and the Quad leaders.*

➢ **Importance of the Quad** *in advancing strategic alliances and promoting shared values.*

> ➢ *Emphasizes the* **Biden-Harris Administration's priority** *on institutionalizing and elevating the Quad partnership.*

Objectives of the Summit:

> ➢ *Strengthening* **strategic convergence** *among the four countries.*

> ➢ *Advancing a* **shared vision** *of a* **free and open Indo-Pacific***.*

> ➢ *Delivering tangible outcomes for partners in the region.*

Key Focus Areas:

> ➢ *Health Security, Natural Disaster Response, Maritime Security, High-quality Infrastructure, Critical and Emerging Technology, Climate and Clean Energy, Cybersecurity.*

Background:

> ➢ *The Quad partnership has grown under the* **Biden-Harris Administration***.*

> ➢ *Since the first* **Quad Leaders Summit** *in 2021, annual summits and regular meetings at various levels have taken place.*

> ➢ *The next* **Quad Summit** *will be hosted by* **India***.*

Broader Context:

> ➢ *President Biden is shifting focus from election campaigning to* **domestic and international policy issues***.*

> ➢ *The* **Quad partnership** *plays a crucial role in promoting regional security and collaboration in the Indo-Pacific region.*

QUAD (Quadrilateral Security Dialogue)

Introduction:

> ➢ *QUAD is an informal strategic forum involving four countries: the United States, India, Japan, and Australia.*

> ➢ *Established to promote a free, open, and inclusive Indo-Pacific region.*

> ➢ *Focuses on maritime security, infrastructure development, climate change, cybersecurity, and pandemic response.*

Origin:

> ➢ *First conceptualized in 2007 by Japan's Prime Minister Shinzo Abe.*

> ➢ *Initially discontinued, but revived in 2017 due to rising concerns over China's growing influence in the Indo-Pacific.*

Key Objectives:

➢ *Ensure a* **rules-based international order***.*

➢ *Promote* **freedom of navigation** *and respect for international law.*

➢ **Counter China's influence** *and assertiveness in the Indo-Pacific region.*

➢ *Strengthen* **economic and security ties** *among the member countries.*

➢ *Enhance cooperation in areas like* **technology, infrastructure, and supply chain resilience***.*

Structure:

➢ *QUAD is not a formal military alliance; it functions as a diplomatic and strategic dialogue.*

➢ *Regular meetings at* **ministerial, senior official***, and* **summit levels***.*

➢ *Operates without a formal secretariat or permanent headquarters.*

Recent Developments:

➢ *The first* **in-person summit** *was held in Washington, D.C., in September 2021.*

➢ *Focus on* **vaccine diplomacy***, supply chains for* **critical technologies** *(like semiconductors), and* **climate change***.*

➢ *Increasing cooperation in areas like* **cybersecurity***,* **space***, and* **emerging technologies***.*

Challenges:

➢ *Perception of* **China containment** *leading to strained relations with Beijing.*

➢ *Different geopolitical priorities of member countries.*

➢ *Navigating the complex dynamics of* **US-China tensions** *and* **India's strategic autonomy***.*

Conclusion:

➢ *QUAD remains a key pillar in the evolving security architecture of the Indo-Pacific region.*

➢ *It balances* **cooperation** *and* **strategic deterrence** *to ensure stability and security, making it significant in the context of global geopolitics.*

Universal Basic Income

Syllabus: GS-3: Indian Economy – Social security net.

Context:

➢ *Due to the phenomenon of jobless growth, i.e., the rise in output and labour productivity without the commensurate growth in employment generation, several countries have mooted the idea of a universal basic income (UBI).*

Universal Basic Income (UBI) in India

Introduction to Jobless Growth and UBI

➢ **Jobless Growth***: A phenomenon where there is a rise in output and labor productivity but without a corresponding increase in employment.*

➢ **Automation and AI Impact***: The International Labour Organization (ILO) highlights that automation and AI are key drivers of reduced job growth and increased inequality.*

➢ **Universal Basic Income (UBI)***: A concept gaining attention globally, where a fixed income is provided to individuals regardless of employment status, aimed at mitigating the effects of unemployment and inequality.*

Current Scenario in India

➢ **India's Youth Unemployment***: 83% of the unemployed population in India consists of the youth, according to ILO.*

➢ **Existing Semi-UBI***: India has various forms of cash transfer schemes (e.g., for farmers, women, and unemployed youth) that resemble a semi-UBI, but they are not universal.*

Arguments in Favor of UBI

➢ **Addressing Demand Contraction***: UBI could help generate demand in the economy by putting money in the hands of unemployed individuals, thereby stimulating economic growth.*

➢ **Support for Vulnerable Sections***: A UBI would offer financial security to those unable to find employment in a market increasingly dominated by automation and digital industries.*

Challenges and Concerns Regarding UBI

➢ **Dignity and Employment***: Critics argue that providing income without work could undermine the dignity of individuals and create social divisions between those who work and those who don't.*

➢ **Employment vs. Cash Transfers**: *Some economists suggest that policies should focus on generating employment rather than solely relying on cash transfers, as employment provides both financial security and social respect.*

Role of Automation and AI in Employment

➢ **Capital-Intensive Investments**: *Government capital investments are often directed toward capital-intensive sectors (e.g., highways, railways) that generate fewer jobs due to automation.*

➢ **Impact of AI and Automation**: *Sectors like banking and e-commerce have seen a reduction in employment despite increased productivity, with automation replacing traditional jobs.*

The Case Against Immediate UBI Implementation

➢ **Uneven Growth**: *While wages have grown, they lag behind the growth in profits, leading to income inequality.*

➢ **Skill Mismatch**: *There is a mismatch between the skills demanded by new industries and those available in the labor market, which could be addressed through education and skill development.*

➢ **Focus on Social Safety Nets**: *India may not be ready for a full UBI, but rather should focus on universalizing social safety nets to ensure broader coverage and support for vulnerable populations.*

Financial Viability of UBI

➢ **Direct Tax Reforms**: *One way to fund UBI or enhanced social safety nets is by increasing the direct tax to GDP ratio, which in India is currently around 6.25%, lower than many developed nations.*

Conclusion

➢ **Need for a Balanced Approach**: *India should focus on creating employment opportunities, enhancing skill development, and strengthening social safety nets before considering a full UBI implementation. Additionally, increasing direct taxation could provide the fiscal space needed to support such initiatives.*

Cholera

Syllabus: GS-3; Science and Technology

Context

➢ *As many as four cases of cholera and 128 fresh cases of diarrhoea were reported in Hoshiarpur's Bhim Nagar and surrounding colonies.*

➢ *Around 28 patients have been hospitalised. Over 220 diarrhoea cases have been reported.*

About

➢ *Cholera is a highly infectious disease caused by the* **bacterium Vibrio cholerae.**

➢ *It primarily affects the intestines and is transmitted through the ingestion of contaminated food and water.*

➢ *Cholera remains a global public health challenge, particularly in areas with inadequate sanitation and limited access to clean water.*

Causes

➢ *Vibrio cholerae is the causative organism. The bacteria produce a toxin (cholera toxin) that causes severe diarrhea and dehydration.*

➢ *The infection is* **transmitted through the fecal-oral route, typically via contaminated drinking water or food.**

Symptoms

➢ *Severe watery diarrhea, often described as "rice-water stools."*

➢ *Vomiting and dehydration, which can lead to rapid fluid loss.*

➢ *If untreated, it can lead to electrolyte imbalance, shock, and even death.*

Risk Factors

➢ *Poor sanitation and lack of clean drinking water.*

➢ *Overcrowded living conditions, especially in refugee camps or slums.*

➢ *Areas affected by natural disasters where infrastructure for sanitation is compromised.*

Treatment

➢ *Oral rehydration salts (ORS) to treat dehydration.*

➢ *Intravenous fluids in severe cases.*

➢ *Antibiotics may be administered to reduce the duration of the disease.*

Prevention

- ➢ *Access to clean drinking water and improved sanitation.*
- ➢ *Hygienic food practices and public health education.*
- ➢ *Vaccination is available for high-risk populations.*

Global Impact

- ➢ *Cholera continues to be endemic in parts of **Africa, Southeast Asia, and Haiti**.*
- ➢ *Outbreaks are often triggered by poor sanitation infrastructure or natural disasters.*
- ➢ *The **World Health Organization (WHO)** considers cholera to be one of the major global public health issues, with ongoing efforts to control and eradicate it.*

Cholera in India

- ➢ *India has historically been one of the hotspots for cholera, particularly in densely populated and low-income areas.*
- ➢ *Improved water supply and sanitation efforts in recent decades have reduced the incidence, but outbreaks still occur, especially in monsoon seasons or after floods.*

Government Initiatives

- ➢ ***National Rural Drinking Water Programme (NRDWP) and Swachh Bharat Mission** have been instrumental in improving water quality and sanitation in India.*
- ➢ *Rapid Response Teams and early detection mechanisms are deployed during outbreaks.*