UPSC Syllabus Topic : GS Paper 3 Environment – Environmental pollution and degradation.

Climate-Smart Agriculture (CSA) Imperative: Necessity for Adopting Climate-Smart Farming Practices in India

To address the challenges of air pollution in India, several key measures should be implemented:

1. **Real-Time Pollution Statistics:**

   - Establish a comprehensive grid of air quality measurement stations across India.

   - Ensure the accurate functioning of these stations and enable real-time dissemination of their data.

2. **Research and Data:**

   - Foster a vibrant research community focused on air pollution issues, generating evidence-based insights.

   - Encourage the publication of research papers to build a knowledge base for effective pollution control measures.

3. **Identifying Pollution Sources:**

   - Deploy specialized instruments to continuously monitor air quality.

   - Break down and analyze the sources of pollution to implement targeted interventions.

4. **Removing Harmful Policies:**

   - Address the root causes of pollution, such as stubble burning, by revisiting and reforming policies in the agriculture/food domain.

   - Evaluate and revise policies that contribute to environmental degradation, such as those related to crop procurement and sowing windows.

5. **Tackling Jurisdictional Issues through Collaboration:**
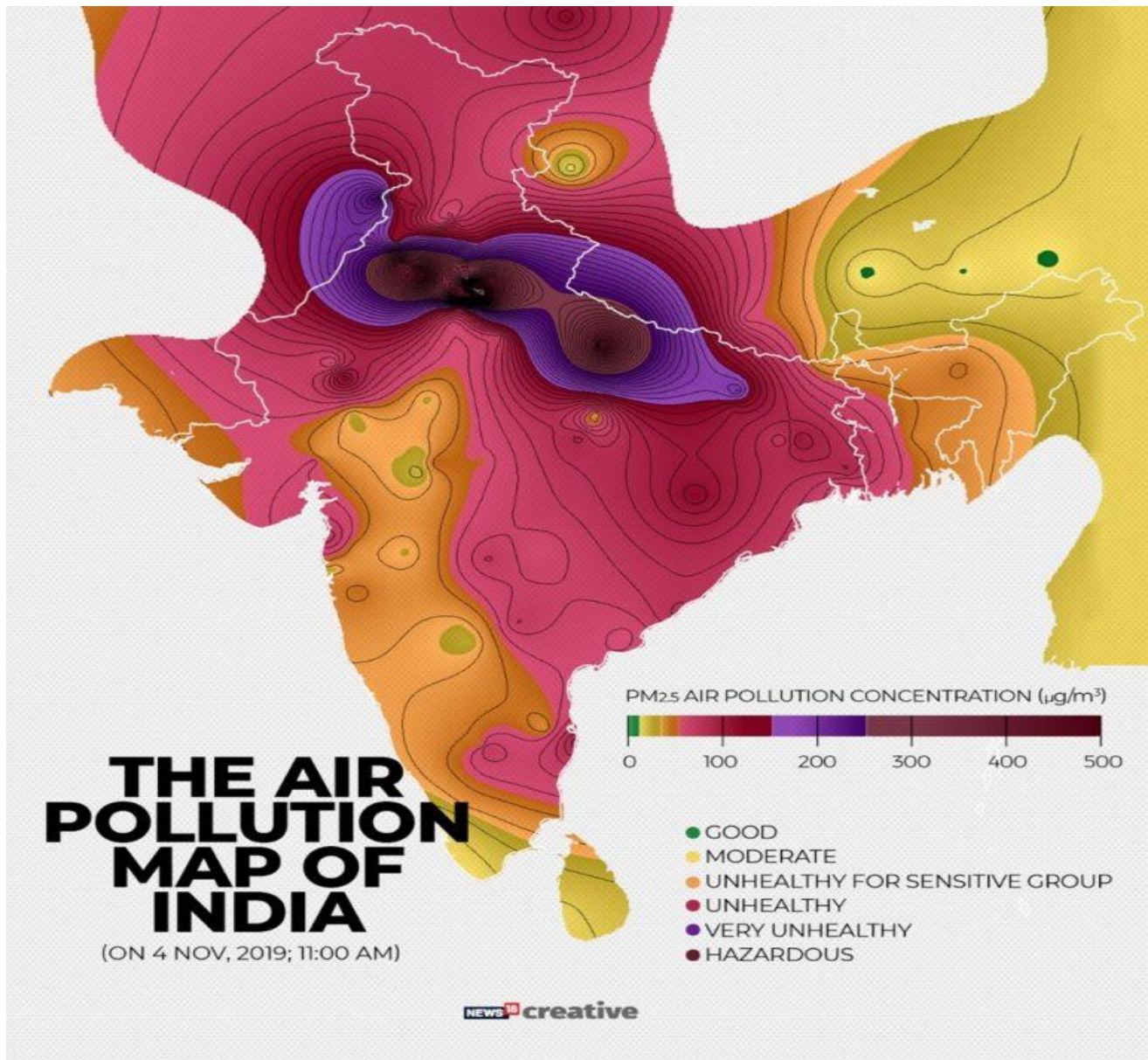
   - Recognize that air quality issues extend beyond legal jurisdictions and require collaboration between various levels of government, including state and national entities.

   - Emphasize cross-border collaboration, particularly in regions where pollution from one country affects another.

   - Implement collaborative efforts in data-sharing, research, and policy formulation across jurisdictions to address the transboundary nature of air pollution.

6. **World Bank Recommendations:**

   - Consider the World Bank's identification of relevant regional airsheds for India, covering urban, provincial, and national jurisdictions.

   - Promote cooperation among authorities within a given airshed for effective data

sharing, research collaboration, and joint policy formulation.

By implementing these measures, India can work towards a comprehensive and collaborative approach to tackle air pollution, ensuring the effectiveness of policies and initiatives across regions and jurisdictions.

THE AIR POLLUTION MAP OF INDIA
(ON 4 NOV, 2019; 11:00 AM)

PM2.5 AIR POLLUTION CONCENTRATION (μg/m³)

0   100   200   300   400   500

- GOOD
- MODERATE
- UNHEALTHY FOR SENSITIVE GROUP
- UNHEALTHY
- VERY UNHEALTHY
- HAZARDOUS

NEWS creative

Air Pollution across Jurisdictions.

Terminology Used:

An area's terrain and climate restrict the amount of pollutants that may disperse outside of it, creating an airshed.
As air masses traverse a terrain, they are created, changing the local atmospheric composition.
Generally speaking, these airsheds do not cross over into political or legal borders.

UPSC Syllabus Topic : GS Paper 3 Science and Technology – Developments and their applications and effects in everyday life.

Alert: The Rising Threat of Deepfakes

What are Deepfakes?

Deepfakes refer to falsified content, including videos, images, and audio, generated through advanced artificial intelligence tools. This technology utilizes a machine learning method called generative adversarial network (GAN) to modify or create realistic-looking media.

Legal Recourse for Deepfake Victims in India:

1. **Social Media Reporting:** Victims can report deepfake content to social media platforms, which are legally obligated to address cybercrime grievances. According to the IT Act, 2000, such platforms must remove offending content within 36 hours.

2. **National Cyber Crime Helpline:** Victims have the option to lodge a complaint with the National Cyber Crime Helpline at 1930.

3. **Current Legislative Gap:** However, there is currently no comprehensive legislation in India specifically addressing deepfakes and crimes related to artificial intelligence.

Measures to Tackle Deepfakes:

1. **AI-based Tools:** Counteractive AI models are being developed to combat deceptive AI activities. These models can subtly alter digital artwork in the background, making it challenging for AI models to effectively train themselves. An example is Intel's deepfake detector, known as FakeCatcher.

2. **Technical Standard for Authentication:** A consortium of software companies is working on an open technical standard to authenticate digital images, aiming to enhance the verification process.

3. **Fact-Check Tools:** Social media intermediaries like Facebook and X are exploring the use of fact-check tools to scrutinize AI-generated content, providing a mechanism to verify the authenticity of media shared on these platforms.

UPSC Syllabus Topic : GS Paper 3 Science and Technology – Developments and their applications and effects in everyday life.

Navigating India's Economic Landscape: Goals, Challenges, and Lessons from Japan

India's Current Economic Plan:

1. **$5 Trillion Economy Goal:** India aims to achieve the status of the world's third-largest economy by 2028, with a targeted GDP of $5 trillion.

2. **Emphasis on Advanced Sectors:** Key sectors for growth include the digital economy, fintech, energy transition, and addressing climate change.

3. **Reforms and Incentives:** Implemented reforms such as GST, the Insolvency and Bankruptcy Code, reduced corporate taxes, and initiatives like Make in India and Start-Up India.

4. **Focus on Inclusive Growth:** The economic plan centers around the concept of "inclusive growth," ensuring broad economic development benefits for citizens.

India's Economic Challenges:

1. **Wealth Inequality:** The richest 1% in India own 41% of the country's wealth, while the poorest 50% possess only a 3% share.

2. **High Tax Burden on the Poor:** Approximately 64% of GST is paid by the bottom half of the population, contrasting with the top 10% contributing only 3%.

3. **Limited Benefits from Growth:** Despite economic growth goals, benefits appear skewed towards the affluent, reflected in India's low inequality index score.

4. **Challenges in Capital, Productivity, and Labor:** Uneven capital distribution, educational and skill level issues, and nascent digital literacy pose hurdles to economic growth.

5. **Per Capita Income Gap:** India ranks 149th globally in per capita income, indicating a significant disparity compared to countries like Japan and China.

6. **Continued Need for Food Security:** Extension of the Pradhan Mantri Garib Kalyan Ann Yojna highlights the persistent challenge of food security.

Learning from Japan's Experience:

1. **Economic Diplomacy:** Japan's shift to the world's third-largest economy involved ego-free economic diplomacy, showcasing the benefits of positive international relations.

2. **Balancing Industrial Growth and Social Stability:** Japan's experience underscores the need for a balanced approach to industrialization that considers its impact on personal and social relationships.

3. **Inclusive Economic Strategies:** Japan's relatively broad distribution of economic benefits, despite social issues, emphasizes the importance of inclusive growth strategies.

In analyzing Japan's journey, India can draw insights for fostering a robust, inclusive, and balanced economic trajectory.