

**DAILY
CURRENT
AFFAIRS
ANALYSIS**



LAKSHYA ACADEMY®

29 JANUARY 2024

1 - Opium Survey for Southeast Asia, 2023: UNODC:

GS II

Health related issues:

- **Context:**

- In a report titled Southeast Asia Opium Survey 2023 - Cultivation, Production, and Implications, the United Nations Office on Drugs and Crime (UNODC) has noted that there has been a notable rise in the cultivation of opium in Southeast Asia's Golden Triangle.
- Typically, the term "Golden Triangle" designates a region of Southeast Asia that is well-known for producing illegal drugs, especially opium. It's a region where the borders of Thailand, Laos, and Myanmar (formerly Burma) converge.
- When these three countries were still part of the opium-producing region, it was referred to as the "Golden Triangle". It now refers to a wider area connected to drug manufacturing, trafficking, and organised crime, though.
- The Golden Crescent, sometimes known as the "Death crescent," is another notorious area for illegal drug trafficking. It encompasses Afghanistan and Iran, providing a convenient route for drugs transported out of Pakistan.

- **Which aspects of the report stand out the most?**

- **An Increase in Opium Cultivation in Myanmar:**

- Over the course of 2022, the Golden Triangle's opium cultivation increased, with a notable uptick in Myanmar.
- In Myanmar, the area dedicated to the cultivation of opium has increased by 18%, to 47,100 hectares.
- Thanks in large part to the upheavals that followed the military takeover in 2021, this growth has rendered Myanmar the world's largest producer of opium.

- **Enhanced Investment and Yield:**

- The opium production per hectare increased by 16% on average to 22.9 kilogrammes.
- This indicates a more sophisticated approach by farmers and purchasers and reflects improvements in farming practices as well as increasing investments in fertilisers and irrigation systems.

- **Growing Costs of Opium:**

- The price paid to growers jumped by 27% to almost USD 355 per kilogramme despite an expanded supply.
- This increase in price highlights how desirable opium is as a crop and commodity, demonstrating robust demand that supports the opium trade in the Golden Triangle.
- Effects of the Opium Ban in Afghanistan:
- According to the paper, a prolonged ban on opium in Afghanistan is expected to result in continued high pricing and increased opium cultivation in Southeast Asia.
- The Taliban's prohibition has resulted in a 95% decrease in opium poppy cultivation in Afghanistan.

- **A contribution to the black market:**

- Growing opium cultivation in the Mekong area (Cambodia, the People's Republic of China (Yunnan Province and Guangxi Zhuang Autonomous area), Lao People's Democratic Republic, Myanmar, Thailand, and Viet Nam) adds to a larger illegal economy.
- It provides a major source of income for organised crime organisations by promoting the development of synthetic drugs and the convergence of drug trafficking, money laundering, and internet illicit activities.

- **Suggestions:**

- The region's problems with crime and administration are made worse by the situation in Myanmar. Given the complicated reality that individuals in opium-cultivation areas experience, addressing these concerns requires comprehensive solutions. Improving socioeconomic circumstances and offering practical alternatives to opium production are essential to reversing this trend.
- The UNODC's direct interaction with rural communities in Myanmar and Laos is more important than ever because of the insecurity and economic problems these communities confront.
- Combating the attractiveness of opium cultivation requires constructing resilience and providing viable alternatives for economic generation.

- **Which are the Essential Details of Opium Poppy Plants?**

- Uses: Opium, which is made from the sap of the opium poppy, has been used for millennia as a sedative, an analgesic, and to make morphine, codeine, and heroin, among other opioids. It has been used medicinally to reduce excruciating pain, stop coughing, and promote sleep.
- Worldwide Production: India is the only nation permitted to produce gum opium under the 1961 United Nations Single Convention on Narcotic Drugs. Opium poppies are also grown in other nations, including the Czech Republic, Australia, Austria, France, China, Hungary, the

Netherlands, Poland, Slovenia, Spain, and Turkey. These nations, however, employ the Concentrate of Poppy Straw technique (CPS) rather than extracting gum.

- In order to prepare the bulb completely, 8 inches of the stalk must be chopped off.
- **What is the Office on Drugs and Crime of the United Nations?**
- It was formed in 1997 and was named as a United Nations Office on Drugs and Crime (UNODC) in 2002.
- By merging the Crime Prevention and Criminal Justice Division of the United Nations Office in Vienna with the United Nations International Drug Control Programme (UNDCP), it functions as the Office for Drug Control and Crime Prevention.
- **Which initiatives are related to the fight against drug abuse?**
- **India related:**
- The Drug-Free India Campaign, or Nasha Mukta Bharat Abhiyaan
- National Drug Demand Reduction Action Plan
- Centre for Narco-Coordination
- The National Fund to Combat Substance Abuse
- **Worldwide Projects:**
- The 1961 Single Convention on Narcotic Drugs
- The Psychotropic Substances Convention of 1971
- The UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.
- All three have been ratified by India, which also passed the Narcotics Drugs and Psychotropic Substances (NDPS) Act, 1985.
- The UN releases the Global Drug Policy Index, sometimes known as the World Drug Report, annually.

- *Source → The Hindu*

2 - Updated IUCN Red List for 2023:

GS III

Environmental Conservation:

- **Context:**

- An update was recently made to the International Union for the Conservation of Nature's (IUCN) Red List, including thousands of new evaluations and reassessments of existing species.
- The 28th Conference of Parties heard this material, which clarified the growing effects of climate change on a variety of species.
- There are currently 157,190 species on the IUCN Red List, 44,016 of which face extinction.
- **Which aspects of the report stand out the most?**
- **Various Species Are Threatened by Climate Change:**
 - Climate change is posing an increasing threat to species that include green turtles and Atlantic salmon.
 - The director general of IUCN highlights the need for swift and aggressive climate action to stop the extinction of species.
 - The most recent update to the IUCN Red List emphasises how closely related the climate and biodiversity challenges are, calling for coordinated efforts to find long-term solutions.
- **Evaluation of Freshwater Fish:**
 - The first thorough analysis of freshwater fish species worldwide is made public.
 - One-quarter of the freshwater fish species that have been surveyed are endangered.
 - The decrease is attributed to exotic species, pollution, overfishing, and climate change.
- **Effect on Salmon from the Atlantic Ocean:**
 - The North Atlantic Ocean basin is home to the ray-finned fish known as Atlantic salmon (*Salmo salar*), which may reach a length of one metre. They can survive in both fresh and saltwater since they are anadromous.
 - Between 2006 and 2020, the population of Atlantic salmon fell by 23%, making them become Near Threatened instead of Least Concerned.
- **The End of the Era for Green Turtles:**
 - The populations of green turtles in the Central South Pacific and the East Pacific are Endangered and Vulnerable, respectively.
 - Threats from climate change affect them at every stage of life, affecting food sources and hatching success.
- **Mahogany trees that are at danger of dying:**

- The popular wood tree known as big-leaf mahogany (*Swietenia macrophylla*) goes from Vulnerable to Endangered.
- Over 180 years, unsustainable harvesting, urban expansion, and illicit logging have all contributed to a 60% decline.
- **Success Stories in Conservation:**
 - Scimitar-horned oryx, a desert antelope moves from Extinct in the Wild to Endangered, displaying successful reintroduction efforts in the Republic of Chad.
 - Thanks to conservation efforts, the saiga antelope has improved from being critically endangered to being near threatened.
- The most important worldwide tool for determining the risk of extinction for plant, fungal, and animal species is the IUCN Red List.
- It is widely accessible, acts as a critical gauge of the health of the world's biodiversity, provides in-depth information on the traits, threats, and conservation strategies of each species, and is essential in forming well-informed conservation policies and decisions.
- The categories of the IUCN Red List specify the species' evaluated risk of extinction. There are nine categories: NE (Not Evaluated) through EX (Extinct). Species classified as Endangered (EN), Vulnerable (VU), and Critically Endangered (CR) are at risk of going extinct.
- It is also a crucial metric for both the Aichi Targets and the Sustainable Development Goals.
- The IUCN Green Status of Species, which evaluates population recovery and quantifies the effectiveness of conservation efforts, is a part of the IUCN Red List.
- Extinct in the Wild, Critically Depleted, Largely Depleted, Moderately Depleted, Slightly Depleted, Fully Recovered, Non-Depleted, and Indeterminate are the eight categories of Green Status.
- An evaluation of the present Red List status's impact from conservation efforts is called a Green Status assessment.

Source → The Hindu

3 - SEZs and Green Hydrogen Projects:

GS III

Infrastructure related issues:

- **Context:**

- The Indian government is thinking about changing the rules as they are now, which might lead to major financial advantages for green hydrogen production projects in Special Economic Zones (SEZs) and other renewable energy initiatives.

- **Which Amendments Are the Most Important?**

- Extending SEZs for Green Hydrogen Projects: In order to support green hydrogen projects, the Ministry of Commerce is considering allowing SEZs to span numerous non-contiguous areas.
- SEZs currently need a contiguous land area of at least 50 hectares. The ministry of commerce is willing to loosen this requirement for initiatives involving green hydrogen.
- Developers will be able to utilise wind energy if multi-locational SEZs are permitted, provided that the turbines are positioned between 250 and 400 metres apart.
- Eligibility for Fiscal Benefits: The proposed amendment intends to provide renewable energy plants utilised in Special Economic Zones (SEZs) for captive consumption with fiscal benefits.
- At the moment, only renewable energy facilities established as SEZ units and intended for power sales outside of SEZs are eligible for fiscal benefits under SEZ regulations.
- However, renewable energy facilities become ineligible for advantages when used for captive consumption.
- If these modifications are accepted, export-focused green hydrogen enterprises will be able to take advantage of tax benefits for setting up and running renewable energy facilities specifically devoted to the production of green hydrogen.
- Captive consumption refers to the utilisation of goods or services within the premises of the producing entity or within a designated area, without their transfer or sale to external markets.

- **A Special Economic Zone: What Is It?**

- About: An area with more lenient economic regulations than the domestic laws of a nation is known as a Special Economic Zone (SEZ).

- **A wide variety of highly specialised zone types are included in the category "SEZ," including but not limited to:**

- Zones of Free Trade (FTZs)
- Zones for Export Processing (EPZs)
- Zones of Free Trade (FTZs)
- India was among the first countries in Asia to establish the first Export Processing Zone (EPZ) at Kandla, Gujarat, in 1965, after realising the model's potential to boost exports.

- India's Special Economic Zones Policy was unveiled in April 2000 with the goals of boosting foreign investment, generating job opportunities, and offering a hassle-free, globally competitive export environment in addition to the construction of infrastructure.
- All laws of India are applicable in SEZs unless specifically exempted as per the SEZ Act/ Rules.
- Each Zone is headed by a Development Commissioner and is governed as per the SEZ Act, 2005 and SEZ Rules, 2006.
- In the SEZ, units may be set up for commerce, manufacturing, or service-related activities.

Source → The Hindu



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4 - Pompe Illness:

GS II

Health related issues:

- **Context:**
- The first patient of Pompe disease in India died at the age of 24, having fought the illness in a semi-comatose state.
- A semi-comatose state is typified by a partial coma, which presents as stupor and disorientation but does not progress to a full coma. People who are semi-comatose can nevertheless respond to sounds and words, including moaning and mumbling.
- **Pompe disease: what is it?**
- **About:**

- The accumulation of glycogen in the body's cells' lysosomes is a hallmark of Pompe disease, often referred to as Glycogen Storage Disease Type II.
- This illness is a rare genetic condition brought on by an acid alpha-glucosidase (GAA) enzyme deficiency. This enzyme is essential for the conversion of glycogen to glucose in cell lysosomes.
- Membrane-enclosed organelles called lysosomes are packed with a variety of enzymes that can degrade proteins, nucleic acids, carbohydrates, and lipids, among other biological polymers.
- Estimates of its prevalence range from 1 in 40,000 to 1 in 300,000 live births.
- **Signs:**
- Degenerative effects on bones, muscle weakness, delayed motor skills, respiratory issues, cardiac involvement, and implications for day-to-day living.
- **Conclusion:**
- The defective enzyme GAA's activity is measured via enzyme assays.
- Genetic testing finds changes in the GAA gene that cause the problem. Certain mutations linked to Pompe Disease are verified by genetic analysis.
- **Therapy:**
- While there is currently no known cure for Pompe disease, there are available therapy options that can manage symptoms and improve the patient's quality of life.
- One popular kind of treatment is called Enzyme Replacement Therapy (ERT), which involves injecting the defective enzyme to reduce the buildup of glycogen.

Source → The Hindu

5 - Plutonium element:

GSIII

Science and Technology related issues:

- At the Berkeley Radiation Laboratory, Dr. Glenn T. Seaborg, Joseph W. Kennedy, Edwin M. McMillan, and Arthur C. Wahl synthesised and isolated plutonium for the first time in 1940. They created it by subjecting uranium-238 to an alpha particle bombardment of deuterium nuclei.

- For the Manhattan Project, a top-secret endeavour to create the first atomic weapons during World War II, plutonium manufacturing was crucial.
- Its fundamental chemistry is quite similar to that of uranium.
- An atomic weapon might be powered by plutonium-239, an isotope of plutonium that could fission.
- Another essential component in the creation of nuclear power is plutonium.

Source → The Hindu



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