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Giant leap for India Semiconductor Mission

Why in News?

- The Union Cabinet chaired by Prime Minister Shri Narendra Modi approved the establishment of three semiconductor units under 'Development of Semiconductors and Display Manufacturing Ecosystems in India. All three units will start construction within the next 100 days.



More about the News

- The Programme for Development of Semiconductors and Display Manufacturing Ecosystem in India was notified on 21.12.2021 with a total outlay of Rs. 76,000 crore. In June, 2023, the Union Cabinet had approved the proposal of Micron for setting up a semiconductor unit in Sanand, Gujarat.
- The approved three semiconductor units are:
 1. Semiconductor Fab with 50,000 wfsm (wafer starts per month) capacity: Tata Electronics Private Limited ("TEPL") will set up a semiconductor fab in partnership with Powerchip Semiconductor Manufacturing Corp (PSMC), Taiwan.

2. Semiconductor ATMP unit in Assam: Tata Semiconductor Assembly and Test Pvt Ltd ("TSAT") will set up a semiconductor unit in Morigaon, Assam. TSAT semiconductor is developing indigenous advanced semiconductor packaging technologies including flip chip and ISIP (integrated system in package) technologies.
3. Semiconductor ATMP unit for specialized chips : CG Power, in partnership with Renesas Electronics Corporation, Japan and Stars Microelectronics, Thailand will set up a semiconductor unit in Sanand, Gujarat. Renesas is a leading semiconductor company focussed on specialized chips. It operates 12 semiconductor facilities and is an important player in microcontrollers, analog, power, and System on Chip ('SoC') products.

Strategic importance of these units :

- Within a very short time, India Semiconductor Mission has achieved four big successes. With these units, the semiconductor ecosystem will get established in India.
- India already has deep capabilities in chip design. With these units, our country will develop capabilities in chip fabrication.
- Advanced packaging technologies will be indigenously developed in India with this announcement.

Employment potential :

- These units will generate direct employment of 20 thousand advanced technology jobs and about 60 thousand indirect jobs.
- These units will accelerate employment creation in downstream automotive, electronics manufacturing, telecom

manufacturing, industrial manufacturing, and other semiconductor consuming industries.

PM-Surya Ghar : Muft Bijli Yojana

Why in the News?

- The Union Cabinet, chaired by the Prime Minister Shri Narendra Modi, has approved PM-Surya Ghar : Muft Bijli Yojana with a total outlay of Rs.75,021 crore for installing rooftop solar and providing free electricity up to 300 units every month for One Crore households. The Prime Minister had launched the scheme on 13th February, 2024.

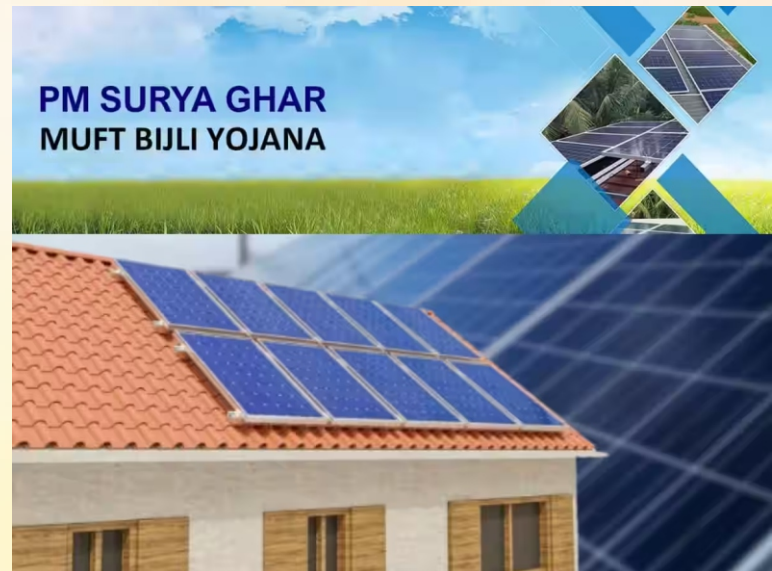
The major highlights of the scheme include:

- The scheme provides a CFA of 60% of system cost for 2 kW systems and 40% of additional system cost for systems between 2 to 3 kW capacity. The CFA will be capped at 3 kW. At current benchmark prices, this will mean Rs 30,000 subsidy for 1 kW system, Rs 60,000 for 2 kW systems and Rs 78,000 for 3 kW systems or higher.
- The households will apply for subsidy through the National Portal and will be able to select a suitable vendor for installing rooftop solar. The National Portal will assist the households in their decision-making process by providing relevant information such as appropriate system sizes, benefits calculator, vendor rating etc.
- Households will be able to access collateral-free low-interest loan products of around 7% at present for installation of residential RTS systems up to 3 kW.
- A Model Solar Village will be developed in each district of the country to act as a role model for adoption of rooftop solar in rural areas.
- Urban Local Bodies and Panchayati Raj Institutions shall also benefit from incentives for promoting RTS installations in their areas.
- The scheme provides a component for

payment security for renewable energy service company (RESCO) based models as well as a fund for innovative projects in RTS.

Outcome and Impact

- Through this scheme, the households will be able to save electricity bills as well as earn additional income through sale of surplus power to DISCOMs. A 3 kW system will be able to generate more than 300 units a month on an average for a household.
- The proposed scheme will result in addition of 30 GW of solar capacity through rooftop solar in the residential sector, generating 1000 BUs of electricity and resulting in reduction of 720 million tonnes of CO2 equivalent emissions over the 25-year lifetime of rooftop systems.



- It is estimated that the scheme will create around 17 lakh direct jobs in manufacturing, logistics, supply chain, sales, installation, O & M and other services.

International Big Cat Alliance (IBCA)

Why in the News?

- The Union Cabinet chaired by Prime Minister Shri Narendra Modi approved the establishment of International Big Cat Alliance (IBCA) with headquarters in India with a one-time budgetary support of Rs.150 crore for a period of five years from 2023-24 to 2027-28.

More About the IBCA

- Acknowledging India's leading role in conserving tigers, other big cats and many

of its endangered species, the Prime Minister of India during his speech on the occasion of Global Tiger Day, 2019 called for an Alliance of Global Leaders to curb poaching in Asia.

- The International Big Cat Alliance has been conceived as a multi-country, multi-agency coalition of 96 big cat range countries, non-range countries interested in big cat conservation, conservation partners and scientific organizations working in the field of big cat conservation besides business groups and corporates willing to contribute to the cause of big cats, to establish networks and develop synergies in a focused manner so as to bring to a common platform a centralized repository of successful practices and personnel, backed by financial support which can be leveraged to strengthen the conservation agenda in the field to arrest decline in big cat population and reverse the trend.
- IBCA aims for mutual cooperation among countries for mutual benefit in furthering the conservation agenda. IBCA would have a multipronged approach in broad basing and establishing linkages manifold in several areas and help in knowledge sharing, capacity building, networking, advocacy, finance and resources support, research and technical support, education and awareness.
- With big cats as mascots for sustainable development and livelihood security, India and the big cat range countries can usher in major efforts on environmental resilience and climate change mitigation, while paving a future where natural ecosystems continue to thrive, and gain centrality in economic and development policies.
- IBCA envisages synergy through a collaborative platform for increased dissemination of gold standard big cat conservation practices, provides access to a central common repository of technical know-how and corpus of funds, strengthens the existing species-specific

intergovernmental platforms, networks and transnational initiatives on conservation and protection and assists securing our ecological future and mitigate adverse effects of climate change.

- The International Big Cat Alliance recognizes the importance of integrating biodiversity policies with sustainable development goals (SDGs) to achieve holistic and inclusive conservation outcomes.
- IBCA governance consists of an Assembly The Alliance ensures sustainable use of natural resources and mitigates challenges emanating from climate change. By safeguarding big cats and their habitats, the IBCA contributes to natural climate adaptation, water and food security and well-being of thousands of communities reliant on these ecosystems.
- IBCA would instill cooperation among countries for mutual benefit and immensely contribute in furthering the long term conservation agenda. of Members, Standing Committee and a Secretariat with its Head Quarter in India. Framework of Agreement (statute) has been drafted largely on the pattern of International Solar Alliance (ISA) and to be finalized by the International Steering Committee (ISC).

INSV TARINI

Why in the News?

- Indian Naval Sailing Vessel Tarini embarked on an expedition from the INS Mandovi, Goa to Port Louis, Mauritius on 28 Feb 24.



More About the News

- This particular expedition conducted under the aegis of Indian Naval Sailing Association (INSA) marks a significant milestone in naval ocean Sailing history as it is the first-ever transoceanic sortie undertaken by Indian women in a double-handed mode.
- Their endeavor serves as a crucial part of their preparation for the upcoming circumnavigation of the globe, scheduled later this year. The officers have been preparing themselves for the last two and half years following a rigorous selection process.
- The expedition was flagged off by a distinguished yachtsman, Commander Abhilash Tomy (Retd), KC, NM who has circumnavigated the globe non-stop on sailing boats twice. He has been mentoring the two women officers for the last six months.
- The transoceanic expedition of INSV Tarini signifies a significant step forward in India's maritime endeavors, showcasing the nation's growing prominence in global maritime activities and gender equality on the high seas. It is a testament to the Indian Navy's commitment to fostering excellence and diversity within its ranks.
- The boat is likely to reach Port Louis, Mauritius on 20 Mar 24.

INSV TARINI

- INSV Tarini has been named after the Tara-Tarini hill shrine located on the Kumari hills on the banks of Rushikulya river in Ganjam district of Odisha. In Sanskrit, the word Tarini means both boat and saviour. Tara-Tarini was the traditional patron deity for sailors and merchants of ancient Odisha, who is worshiped for safety and success at sea.
- INSV Tarini is a 55-foot sailing vessel, which has been built indigenously, and inducted in the Indian Navy earlier this year. INSV Tarini is a sloop built by Divar-based Aquarius Shipyard.
- It is slated to be the platform for the Indian Navy's first Indian all-women circumn-

avigation of the globe expedition. It has a Raymarine navigation suite and an array of satellite communication systems on board through which contact can be made from anywhere.

Report on Status of Leopards in India**Why in the News?**

- Union Minister for Environment, Forest and Climate Change, Shri Bhupender Yadav released the report on Status of Leopards in India, on 29th February, 2024 at New Delhi.
- The fifth cycle leopard population estimation was carried out by the National Tiger Conservation Authority and Wildlife



Institute of India, in collaboration with State Forest Departments, as part of the quadrennial "Monitoring of Tiger, Co-predators, prey and their habitat" exercise in tiger range States. This exercise has proved invaluable to the conservation efforts of the country.

More About the News

- India's leopard population is estimated at 13,874 (Range: 12,616 – 15,132) individuals, representing a stable population in comparison to the similar area being sampled in 2018 with 12852 (12,172-13,535) individuals. This estimate represents a population of 70% of leopard habitat, the Himalayas and semi arid parts of the country which are not tiger habitat were not sampled.
- Madhya Pradesh houses the largest population of leopards in the country – 3907 (2018: 3421), followed by Maharashtra (2022: 1985; 2018: 1,690), Karnataka (2022:

1,879 ; 2018: 1,783) and Tamil Nadu (2022: 1,070; 2018: 868). Tiger Reserves or sites with highest leopard population are, Nagarajunasagar Srisailam (Andhra Pradesh), followed by Panna (Madhya Pradesh), and Satpura (Madhya Pradesh).

- The fifth cycle of leopard population estimation (2022) in India focused on forested habitats within 18 tiger states, covering four major tiger conservation landscapes. Non-forested habitats, arid, and high Himalayas above 2000 msl (~ 30% area) were not sampled for leopards.
- This cycle conducted a foot survey spanning 6,41,449 km to estimate carnivore signs and prey abundance. Camera traps were strategically placed at 32,803 locations, resulting in a total of 4,70,81,881 photographs, resulting in 85,488 photo-captures of leopards.
- The findings underscore the critical role of Protected Areas in conserving leopard populations. While tiger reserves serve as important strongholds, addressing conservation gaps outside protected areas is equally vital. Rising incidents of conflict pose challenges for both leopards and communities.

- Since leopard survival outside protected areas is equally important, collaborative efforts involving government agencies, conservation organizations, and local communities are essential to enhance habitat protection and mitigate human-wildlife conflict.

About Leopard

- Leopards, is an enigmatic animal which evoke reverence and dislike and is facing escalating threats across their range in India. Amidst habitat loss, human-wildlife conflict, and poaching, the National Tiger Conservation Authority (NTCA) spearheaded the fifth cycle of leopard population estimation, shedding light on the status and trends of these elusive big cats.
- Spanning tiger range States and encompassing diverse landscapes, the comprehensive survey employed robust scientific methodologies using technology to assess leopard abundance. Through a meticulous process combining camera trapping, habitat analysis, and population modeling, the study revealed crucial insights into leopard distribution and conservation challenges.

