Topics

- India carbon crediting mechanism with Japan
- India and global electronics revolut
- What is fissile material??
- JCPOA
- Mavavgat coastline
- ***Caretta caretta***
- Mains

By saurabh Pandey

THE HINDU

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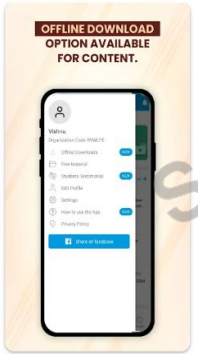

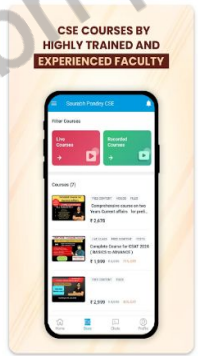

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BY SAURABH PANDEY SIR

India plans to enter into carbon crediting mechanism with Japan

Abhishek Law
NEW DELHI

Green move: The proposal will boost job creation via investments in low-carbon and clean technologies. GETTY IMAGES/ISTOCK

India is looking to enter into a carbon trading and carbon credit adjustment mechanism with Japan.

The two countries plan to sign a Memorandum of Cooperation for setting up a Joint Crediting Mechanism (JCM) with emission-reduction credits being shared, as per Cabinet note prepared in July and reviewed by *businessline*.

Under the mechanism, carbon credits will be 'allocated through a structured process' and there will be a 'registry to track these credits," as per the note.

Projects will be taken up only when they are cleared through a Joint Committee, and both governments will notify these credits issued based on the submitted reports. The credits will be allocated to the respective registries of India and Japan, and can subsequently be used towards the Nationally Determined Contribution (a climate action plan to cut emissions and adapt to climate impact) of both countries.

The proposal will "boost job creation by attracting investments in low-carbon and clean technologies". There will also be any financial implication of such a project.

"A draft Cabinet Note has been prepared ..... authorising the MoEFCC (Ministry of Environment, Forest and Climate Change) for the signing of MoC (Memorandum of Cooperation) between Government of India and the Government of Japan in consultation with the concerned ministries.... and MEA," as per office memorandum of one of the Ministries said. The JCM will facilitate diffusion of leading decarbonising technologies, equipment, machinery, products, systems and infrastructure, implementation of mitigation actions, among others.

The draft (Cabinet note) has approval of the Environment Minister.

Bilateral ties

The JCM will be formed under Article 6.2 of the Paris Agreement.

As per the draft Memorandum of Cooperation, the mechanism will be implemented in accordance with "relevant domestic laws and regulation" in these respective countries.

A joint committee will be established and it will develop rules and guidelines required for implementation of the JCM that cover project cycle procedures, methodologies, project design documents, monitoring and designation of third-party entities, among others.

"Decisions by the Joint Committee on registration of the project, crediting period, sharing of credits, issuance of credits, and other related matters on the JCM are made with prior confirmation of the Government of Japan and Government of India, unless otherwise specified," one of the provisions stated.

Emission cuts

Both governments "mutually recognise that part of JCM credits issued from emission reductions and removals may be towards the achievement of Japan's nationally determined contribution and rest of the said JCM credits may contribute to the achievement of India's nationally determined contribution" while ensuring double counting is avoided.

Each government can authorise part of JCM credits for international mitigation purposes too.

The two countries will confirm registration of a project prior to a decision by the joint committee; while the percentage of credit allocation will also be decided.

The MoC (draft) also mentions Japan will facilitate the transfer of technology, finance and capacity building in respect of new technologies for the joint crediting mechanism.

(The writer is with The Hindu businessline)

India plans to enter into carbon crediting mechanism with Japan

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- The two countries plan to sign a Memorandum of Cooperation for setting up a Joint Crediting Mechanism (JCM) with emission reduction credits being shared

What is carbon credit ??

- Carbon credits are permits that allow the owner to emit a certain amount of carbon dioxide or other greenhouse gases (GHGs).
- One credit permits the emission of one ton of carbon dioxide or the equivalent of other greenhouse gases. Carbon credits are also known as carbon offsets

What is the Paris Agreement Crediting Mechanism?

- Article 6 of the Paris Agreement sets out how countries can pursue voluntary cooperation to reach their climate targets.
- It enables international cooperation to tackle climate change and unlock financial support for developing countries.
- This means that, under Article 6, countries are able to transfer carbon credits earned from the reduction of greenhouse gas emissions to help one or more countries meet their climate targets.
-

- There are three tools which countries can draw upon under Article 6, one of which is the Paris Agreement Crediting Mechanism (PACM) - the UN’s new high-integrity carbon crediting mechanism.
-

Elevating India's capital goods for a global electronics revolution

BUDGET IN FOCUS

Pankaj Mohindroo

In the early days of the Industrial Revolution, a single invention changed the world: the steam engine. This powered factories, drove progress and transformed economies. The steam engine symbolised a nation's ability to innovate, produce, and lead.

Today, India stands at similar crossroads with its capital-goods industry, especially in electronics manufacturing. The industrial countries of East Asia did not invest in machinery by chance. The investments were driven by export-oriented strategies and demands of international competition. To seize this moment, we must harness the same spirit of innovation that fuelled the Industrial Revolution.

India's electronics production has reached an impressive milestone of about $115 billion in FY24, growing by almost four times in the past decade. Projections for the next five years are even more promising, with expectations to multiply this figure by five times. Globally, the electronics market, currently valued at $4.5 trillion, is anticipated to soar to $6.1 trillion by 2030.

These figures highlight an opportunity and a call to action for India to capture its rightful place in the world stage.

Central to this vision is the role of capital goods – machinery, tools, and equipment that drive production. Advanced capital goods enable us to produce high-quality electronics efficiently and at scale. Our focus should be on developing unique, cutting-edge solutions that serve domestic and global markets. This demands a significant investment in research and development, supported by policies that encourage innovation and protect intellectual property rights (IPR).

Demand supply gap

Meeting domestic demand and targeting the export market are both essential. At home, there is an urgent need to close the gap between the demand and supply of capital goods. By bolstering our manufacturing infrastructure, we can reduce dependency on imports and ensure a steady supply of high-quality equipment for local consumption. As India aims to increase its electronics production by five times, the demand for advanced manufacturing technologies will also surge, necessitating a robust domestic capital goods sector.

To spearhead this initiative, there is a need for a dedicated centre with a substantive corpus of minimum ₹1,000 crore focused on innovation in capital goods, potentially housed at the Central Manufacturing Technology Institute (CMTI). Such a centre could drive the development of advanced manufacturing technologies and build capabilities essential for electronics and high-tech manufacturing. The CMTI can partner industry leaders and academic institutions to foster innovation, streamline production processes and raise overall competitiveness of Indian manufacturers.

Fostering R&D

India's robust IPR protection can create a secure environment where new ideas can thrive. By promoting strong R&D ecosystem, we can develop indigenous technologies that not only meet international standards but also set new benchmarks in quality and efficiency.

Globally, the aim is to position Indian firms as formidable contenders. This needs a strategic approach, including understanding global market dynamics, adhering to international quality standards and building a reputation for excellence. The question then arises: why can't India produce firms that rival the likes of ASML, the Dutch giant known for advanced machinery?

Creating such an Indian champion involves many critical steps.

Prioritising the development and acquisition of advanced manufacturing technologies is crucial, supported by dedicated funds for acquiring and enhancing capital goods, including second-hand equipment.

Investing in education and training programmes to equip workforce with technical and soft skills is equally vital. Strong collaboration between industry and academia can foster innovation and ensure that research aligns with industry needs, leading to breakthrough technologies and processes. Additionally, government policies must support the growth of the capital-goods industry by providing incentives for R&D, facilitating ease of doing business, and ensuring a stable regulatory environment.

As the world moves towards sustainable manufacturing practices, India must adopt eco-friendly technologies and processes, enhancing our global competitiveness and positioning India as a responsible manufacturing hub. Embracing digital technologies such as AI, IoT, and big data can revolutionise manufacturing processes, making them more efficient and cost-effective.

Addressing technology and skill gaps is also critical for India's ambitions in the electronics sector. Joint ventures with global leading firms can facilitate skills and technology transfer, while government programme to attract skilled diaspora and foreign experts can build domestic capabilities.

Establishing a roadmap for developing key equipment and progressing to the most cutting-edge technologies, will be essential.

Reducing the cost of capital can enable Indian manufacturers to invest more in technology and innovation, making them more competitive globally.

(Pankaj Mohindroo is the Chairman of India Cellular & Electronics Association, the country's apex industry body for electronics with a vision to make India a global hub for electronics manufacturing and exports. Kapil Gupta, Associate Director, ICEA has contributed to this article)

India and global electronics revolution

- India’s electronics production has reached an impressive milestone of about $115 billion in FY24, growing by almost four times in the past decade.
- Projections for the next □ve years are even more promising, with expectations to multiply this □figure by □five times.
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- Central to this vision is the role of capital goods — machinery, tools, and equipment that drive production.
- Advanced capital goods enable us to produce high-quality electronics efficiently and at scale.
- Our focus should be on developing unique, cutting edge solutions that serve domestic and global markets.
- This demands a significant investment in research and development, supported by policies that encourage innovation and protect intellectual property rights (IPR).

Steps needed

- Demand supply gap Meeting domestic demand and targeting the export market are both essential.
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- By bolstering our manufacturing infrastructure, we can reduce dependency on imports and ensure a steady supply of high-quality equipment for local consumption

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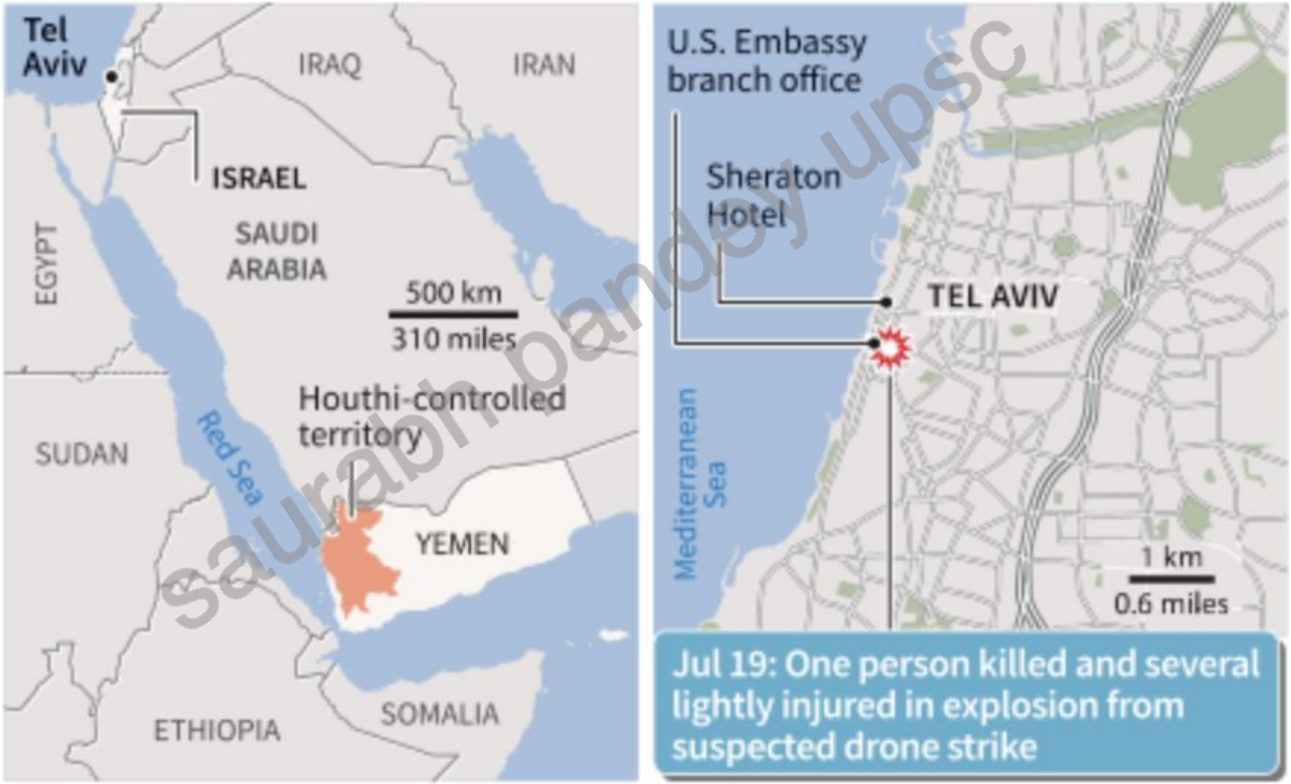
Long range

Yemen's Houthis have claimed a deadly drone strike on Tel Aviv



Iran capable of producing fissile material, says Blinken

Agence France-Presse
WASHINGTON

Iran is capable of producing fissile material for use in a nuclear weapon within "one or two weeks," U.S. Secretary of State Antony Blinken said on Friday.

News of Iran's capabilities follows the recent election of President Masoud Pezeshkian, who has said his goal is to "get Iran out of its isolation," and who favours reviving the 2015 nuclear deal between Iran and global powers.

Mr. Blinken said that "what we've seen in the last weeks and months is an Iran that's actually moving forward" with its nuclear program.

The United States unilaterally withdrew in 2018 from the Iran nuclear deal, which was designed to regulate Iran's atomic activities in exchange for the lifting of international sanctions.


Antony Blinken

Speaking at a security forum in Colorado, Mr. Blinken blamed the collapse of the nuclear deal for the acceleration in Iran's capabilities.

"Instead of being at least a year away from having the breakout capacity of producing fissile material for a nuclear weapon, [Iran] is now probably one or two weeks away from doing that," Mr. Blinken said. He added that Iran had not yet developed a nuclear weapon.

Iran's acting Foreign Minister Ali Bagheri told *CNN* earlier this week that his country remained committed to the deal, known as the JCPOA.

"We are still a member of JCPOA. America has not yet been able to return to the JCPOA, so the goal we are pursuing is the revival of the 2015 agreement," he said.

Mr. Bagheri added that: "Neither I nor anyone else in Iran has not talked and will not talk about a new agreement."

Mr. Blinken made the statement just days after reports emerged that the U.S. Secret Service increased security for Republican presidential nominee Donald Trump weeks ago, after authorities learned of an alleged Iranian plot to kill him.

What is fissile material??

- A nuclide that is capable of undergoing fission after capturing low-energy thermal (slow) neutrons.
- Although sometimes used as a synonym for fissionable material, this term has acquired its more-restrictive interpretation with the limitation that the nuclide must be fissionable by *thermal neutrons*.
- With that interpretation, the three primary fissile materials are uranium-233, uranium-235, and plutonium-239.
- This definition excludes natural uranium and depleted uranium that have not been irradiated, or have only been irradiated in thermal reactors.

JCPOA

- The JCPOA was the result of prolonged negotiations from 2013 and 2015 between Iran and P5+1 (China, France, Germany, Russia, the United Kingdom, the United States and the European Union, or the EU).
- The JCPOA obliged Iran to accept constraints on its enrichment programme verified by an intrusive inspection regime in return for a partial lifting of economic sanction

- On the nuclear front, beginning in May 2019, Iran began to move away from JCPOA's constraints incrementally:
- exceeding the ceilings of 300kg on low-enriched uranium and 130 MT on heavy-water; raising enrichment levels from 3.67% to 4.5%;
- stepping up research and development on advanced centrifuges;
- resuming enrichment at Fordow;
- and violating limits on the number of centrifuges in use

- . Finally, in January 2020, following the drone strike on Islamic Revolutionary Guard Corps commander Gen. Qasem Soleiman, Tehran announced that it would no longer observe the JCPOA’s restraints.
-

- Tensions rose as the U.S. pushed ahead with its unilateral sanctions, widening their scope to cover nearly all Iranian banks connected to the global financial system,
- industries related to metallurgy, energy and shipping, individuals related to the defence, intelligence and nuclear establishment

- For the first year after the U.S. withdrawal, Iran's response was muted as the E-3 (France, Germany, the U.K.) and the EU promised to find ways to mitigate the U.S. decision.

Safe harbour

A view of Mavavgat coastline in Antalya, Turkey, where sea turtles lay eggs. The coastline is a major breeding area for the endangered loggerheads also known as Caretta carettas, on the International Union for Conservation of Nature's red list of threatened species. AFP

Mavavgat coastline

- Mavavgat coastline in Antalya, Turkey, where sea turtles lay eggs.
- The coastline is a major breeding area for the endangered loggerheads also known as Caretta carettas, on the International Union for Conservation of Nature’s red list of threatened species.


Turkish Riviera
ASPENDOS
PERGE
ANTALYA
MANAVGAT FALLS
BELEK
SIDE
KEMER
ALANYA
PHASLLIS
OLYMPOS
MYRA
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KAS
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Caretta caretta / Loggerhead sea turtle

Caretta caretta **is found in nearly all the world's temperate and tropical oceans: the Atlantic Ocean from Newfoundland to Argentina, the Indian Ocean from southern Africa to the Arabian Gulf to western Australia, the Mediterranean Sea, and the Pacific Ocean from Alaska to Chile and Australia to Japan. During winter months loggerhead sea turtles migrate to tropical and subtropical waters.**


saurabh pandey upsc

Preferred habitat of *Caretta caretta* individuals changes throughout the life cycle.

Adult females go ashore to lay eggs and seem to prefer steeply sloped, high energy beaches.

When hatchlings emerge from the nest, they head for the ocean.

Young juveniles are typically found among drifting *Sargassum* mats in warm ocean currents.

Older juveniles and adults are most often found in coastal waters and tend to prefer a rocky or muddy substrate over a sandy one

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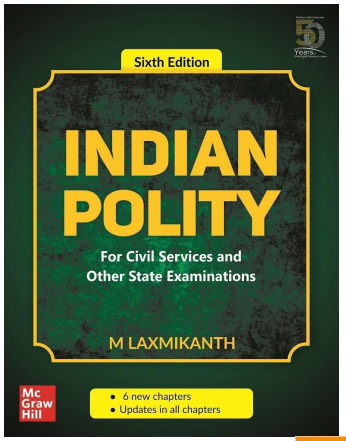

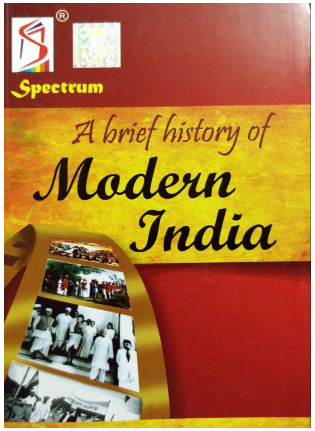

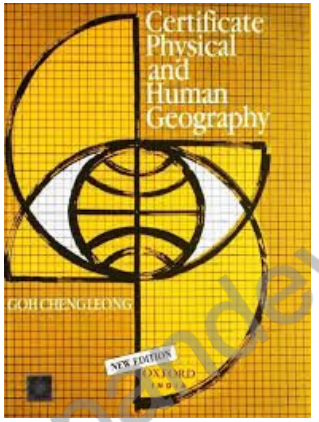

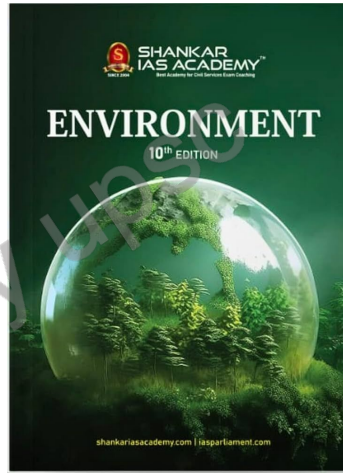

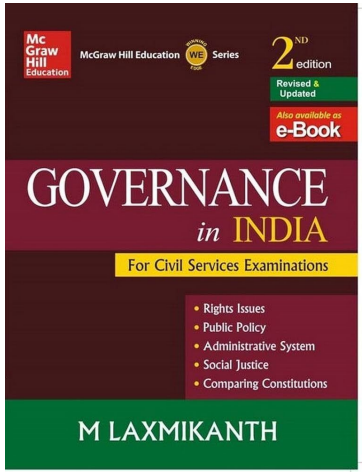

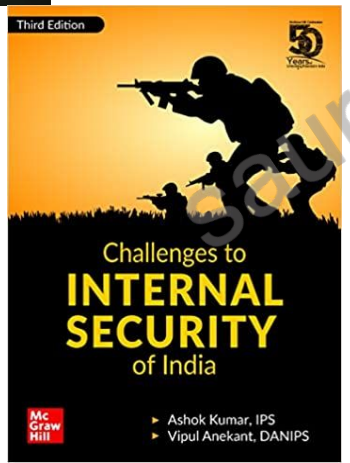

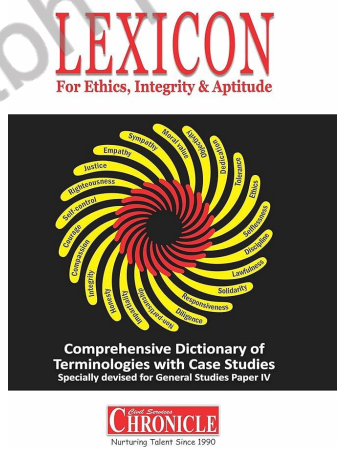

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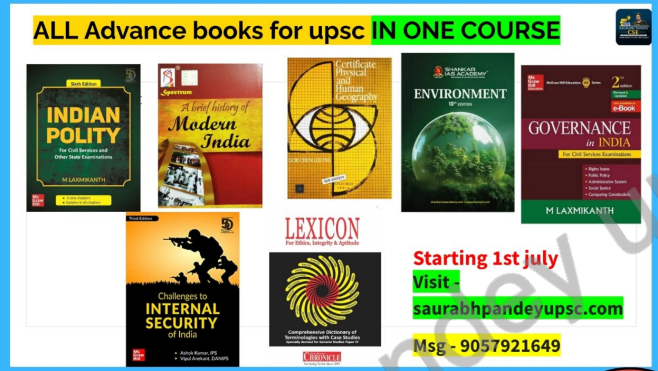

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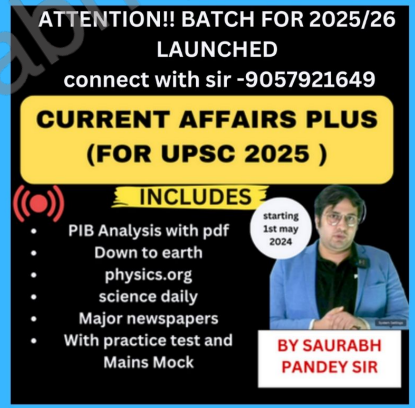

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