Daily News Analysis

The Hindu Important News Articles & Editorial For UPSC CSE

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Edition: International Table of Contents

The visit of Italian Deputy Prime Minister and Foreign Minister Antonio Tajani to India has brought renewed momentum to the stalled India-EU Bilateral Trade and Investment Agreement (BTIA) and the India-Middle East-Europe Corridor (IMEC). In his interview, Tajani emphasized open markets, fair competition, and strategic cooperation, positioning Europe as a long-term partner for India in trade and infrastructure.

'Trade wars benefit no one; we believe in power of open markets, free and fair competition, a level playing field'

Italian Deputy Prime Minister and Foreign Minister, who is on a visit to New Delhi, pitches for the India-EU Bilateral Trade and Investment Agreement; while past negotiations may not have gone as planned, political momentum behind the current talks is stronger than ever, he says; Trump's decision to pause U.S. tariffs plan for 90 days is a signal that transatlantic negotiations can be done, he adds

INTERVIEW

Antonio Tajani

Suhasini Haidar
NEW DELHI

Trade wars benefit no one, said Italian Deputy Prime Minister and Foreign Minister Antonio Tajani, who is in New Delhi for a two-day bilateral visit. He placed emphasis on the hope that after pausing reciprocal tariffs for 90 days, the U.S. can engage with the European Union for an agreement, and that India and the EU can also conclude the Bilateral Trade and Investment Agreement (BTIA) this year. During a business event on Friday, Mr. Tajani, External Affairs Minister S. Jaishankar, and Commerce Minister Piyush Goyal discussed the need to grow current bilateral trade, presently at about $14 billion, and to try to realise the much-delayed India-Middle East-Europe Corridor (IMEC) with a Ministerial meeting in Italy later this year.

In a written interview to *The Hindu*, Mr. Tajani admitted that it would be hard to achieve the IMEC's potential until there is peace between Israel and its neighbours. Excerpts:

How does Italy view the U.S. decisions on tariffs?

My dream is to see zero tariffs! Tariffs hurt both consumers and businesses alike. We firmly believe in the power of open markets, free and fair competition, and a level playing field for all. U.S. President [Donald] Trump's decision to pause his tariffs plan for 90 days is a signal that we want to interpret positively, hoping that it will facilitate negotiations. Trade wars serve no one's interests, especially when it comes to the transatlantic trade relationship.

Is Italy disappointed that the U.S. has not consulted the EU more, leading to many public differences in the past few months, including over Mr. Trump's claims on Greenland?

Italy, like India, has already built strong ties with the Trump administration. President Trump is driving a bold agenda both domestically and internationally, which can sometimes cause friction, even with close partners like the EU. We must do everything we can to prevent a transatlantic divide.

Regarding President Trump's tariff policies, our approach must be one of constructive engagement,

not confrontation, prioritising open and honest dialogue with Washington.

During her visit to India in February, European Commission President Ursula von der Leyen and Prime Minister Narendra Modi set a year-end deadline for the EU-India BTIA to be finalised. How likely is this, given previous delays?

We recognise that past negotiations have not always gone as planned, but it is undeniable that the political momentum behind the current talks is stronger than ever.

The visit of the entire European Commission to New Delhi in February was a powerful signal of trust and political will directed toward the Indian leadership. The EU is determined to be a key partner to India, and there is broad consensus across Brussels and European capitals on the importance of securing a meaningful agreement.

One of the major blocks to BTIA negotiations has been on India's tariffs and market access issues for wine and spirits, and agriculture and dairy products. Given that the India-U.S. Bilateral Trade Agreement is being negotiated this year as well, would Italy and EU expect the same terms as those being offered to the U.S. in bilateral trade negotiations?

Every trade relationship is unique and we do not assume that what works for India and the U.S. will automatically benefit the EU as well.

In the context of ongoing negotiations, what we seek is the flexibility needed to achieve the mutually beneficial agreement we all aspire to. On our part, we are fully committed to going the extra mile to secure a meaningful and balanced EU-India trade agreement, and we are confident that our counterparts share this same determination.

Can any progress be made on IMEC between India and Italy's Trieste without peace and stability along the route between the UAE, Saudi Arabia, Jordan, and Israel's Haifa Port (countries that have tense ties at present)?

Of course, until peace in the Middle East is established, it will be hard to achieve the full potential of the Corridor.

Nevertheless, for the Italian government, this project represents a beacon of hope. It holds the promise of acting as a catalyst for stability across the broader region. It is essential to start shaping a new vision for progress today – one that focuses on strengthening geo-economic and intermodal connectivity between Asia, the Middle East, and Europe. This is why we are offering the port of Trieste as a hub to support the "Cotton Road". Trieste is a key port in northeast Italy, a region that leads in our economy and drives growth and innovation.

Our newly appointed Special Envoy will focus on key areas, including the development of vital port, railway, and digital infrastructure, as well as securing the necessary financial support, with a strong emphasis on the EU's Global Gateway initiative.

I plan to organise a Ministerial meeting with all countries part of the Cotton Road with the goal to strengthen further our cooperation.

Key Highlights:

India-EU Bilateral Trade and Investment Agreement (BTIA):

- Negotiations began in 2007 but were stalled due to differences over tariffs, market access, and regulatory standards.
- A year-end deadline (2025) has been set after renewed political commitment in early 2025.
- Contentious issues include:
    - Tariff concessions on alcoholic beverages, dairy, and agriculture products.
    - EU's demand for stronger IPR protections and environmental standards.
    - India's concern over data privacy and local market protections.

Tajani acknowledged past failures but highlighted unprecedented political momentum behind the current talks, making a breakthrough more likely.

Global Trade Climate:

- Tajani opposed protectionism, stating "Trade wars benefit no one."
- Welcomed the U.S. pause on reciprocal tariffs as a sign that negotiations, not confrontation, should be the way forward.
- Emphasized transatlantic cooperation while subtly pointing at tensions under Trump's America-first policy.

India-Middle East-Europe Corridor (IMEC):

- Envisioned as a multimodal connectivity corridor to counter China's Belt and Road Initiative (BRI).
- Challenges:
  - Geopolitical instability in the Middle East (Israel-Hamas conflict, strained Saudi-Iran ties).
  - Tajani admits full potential is dependent on regional peace, but Italy remains committed via Trieste port as a European hub.
  - Emphasis on EU's Global Gateway Initiative for financing and capacity building.

Strategic Significance:

Aspect	India's Interest	EU/Italy's Interest
Trade Diversification	Reduce reliance on China; access to high-quality tech and goods	Access to India's large market, strategic Indo-Pacific partner
BTIA	Boost exports; attract EU investments	Tap Indian growth, regulatory alignment
IMEC	Strategic corridor for energy and goods	Geopolitical balancing against BRI
Digital & IPR standards	Sovereignty and data protection	Market access with regulatory convergence

Key Challenges:

- Diverging standards on data protection, digital trade, and labour/environmental regulations.
- India's sensitive sectors (dairy, agriculture) remain points of friction.
- Geopolitical hurdles in the IMEC corridor (Middle East conflicts).

Government of India's Position:

- Keen to conclude BTIA as part of its broader FTA push (UK, UAE, EFTA).

- Supports IMEC as a strategic alternative to China's BRI.
- Seeks mutual flexibility in trade talks without compromising domestic economic interests.

UPSC MainsPractice Question

Ques : *India-EU Bilateral Trade and Investment Agreement (BTIA) represents a pivotal step in deepening India's economic and strategic integration with Europe. Discuss the prospects and challenges associated with finalising this agreement in the current geopolitical context. (250 words)*

Page 05 : Prelims Fact

The Defence Research and Development Organisation (DRDO) has successfully conducted release trials of its 1,000-kg long-range glide bomb named 'Gaurav', from a Su-30 MKI aircraft, demonstrating precision strike capabilities up to 100 km.

IN BRIEF

DRDO does release trials of long-range glide bomb

The Defence Research and Development Organisation successfully conducted release trials of the 1,000-kg long-range glide bomb 'Gaurav' between April 8 and 10 from a Su-30 MKI fighter jet. "During the trials, the weapon was integrated to multiple stations in different warhead configurations, with land target on Island. The trials successfully demonstrated range close to 100 km with pin-point accuracy," the DRDO said in a statement on Friday, adding that the trials would pave the way for the induction of the weapon into the Air Force.

Key Facts :

Feature	Details
Name	Gaurav
Type	Long-range glide bomb
Weight	1,000 kg
Launch Platform	Su-30 MKI fighter jet
Trial Dates	April 8–10, 2025
Range	Close to 100 km
Accuracy	Pin-point (precision-guided)
Purpose	Precision strike on land targets
Status	Post-trial; to be inducted into Indian Air Force

Technical Insight:

- A glide bomb is a type of precision-guided munition that uses aerodynamic surfaces to extend its range without propulsion.
- Can be released from a standoff distance, ensuring pilot safety by keeping the aircraft away from enemy air defense systems

Significance for IAF:

- Enhances standoff strike capability.
- Useful in limited conflict zones and deep-strike missions.
- Boosts India's indigenous weapons manufacturing under 'Atmanirbhar Bharat'.

UPSC PrelimsPractice Question

Ques :Consider the following statements about the DRDO's 'Gaurav' bomb:

1. It is a 1,000-kg powered missile developed by DRDO.

2. It was tested from a Su-30 MKI fighter aircraft.

3. It demonstrated a range of approximately 100 km with precision accuracy.

Which of the above statements is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Ans: (b)

Page : 06 :GS 2 : Social Justice

The article critically analyzes the vision of the **National Education Policy (NEP) 2020** to restructure India's higher education system from **siloed, discipline-specific institutions** into**multidisciplinary, cross-disciplinary, and interdisciplinary universities**that can foster**integrated learning and research**. It examines both structural and philosophical challenges and offers pathways for the university of the future.

Giving shape to the university of the future

The National Education Policy proposes to change India's siloed higher education system by establishing large multidisciplinary educational institutions. The emphasis will be on having a more cross-disciplinary education, a pedagogical shift towards "communication, discussion, debate, research, and opportunities for cross-disciplinary and interdisciplinary thinking", and interdisciplinary research.

How do we transform the existing system of universities, colleges, and the research ecosystem in India to achieve these objectives? The answer: a progression from a multidisciplinary campus or university space to a cross-disciplinary collaborative teaching and research practice, interdisciplinary thought and also research based on integrated disciplinary frameworks.

Multidisciplinarity is the existence of multiple disciplines in a single project or programme without seeking interaction. Disciplines exist parallel to each other, with each applying their own disciplinary methods and perspectives and maintaining boundaries. Cross-disciplinary approach expects collaboration between different disciplines without emphasising knowledge integration. It works towards creating connections and fostering dialogue between disciplines. An example would be an educationist and an economist writing this article. An interdisciplinary approach on the other hand, integrates insights, methods, and concepts from different disciplines to address complex real-world problems. It goes beyond collaboration, leading to the synthesis of knowledge across disciplinary boundaries.

The multidisciplinary campus
Phasing out single stream institutes of higher education (IHE) to establish a multidisciplinary campus can work in two ways. First, by adding departments to expand the existing core disciplinary focus – for example, the Indian Institutes of Technology are adding or strengthening their humanities and social sciences, offering integrated masters programmes in economics and allied disciplines. Second, creating university clusters by connecting existing

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Creating a higher education structure in India that implements the vision of the National Education Policy 2020 will need to be a well-thought-out plan

institutions – for example, a commerce college can collaborate with an arts and science college to create a cluster university. This requires administrative streamlining and not just academic collaboration. Clustering single stream institutions might be a cost effective and time efficient way of creating large multidisciplinary institutions in the short term. However, according to the 2020-21 All India Survey of Higher Education (AISHE), a significant proportion of institutions are undergraduate colleges, 35% of these are single stream, and many of these are only B.Ed colleges, making it difficult to find appropriate disciplinary variety nearby that is suitable for clustering.

In addition to repurposing existing IHEs, new multidisciplinary universities will have to be established to reach the goal of having "at least one in or near every district" by 2030. It would be wise to establish a single multidisciplinary campus in a district rather than have one institution with multiple campuses across districts to maximise educational and research efficiency. Research shows that while public universities have a higher educational efficiency, they have lower research efficiency because they need to manage multiple campuses.

Cross-disciplinary learning and practice
The university of the future cannot be just a collection of multiple departments. It needs a disciplinary faculty that is open to collaboration and diverse points of views, and experienced in working across disciplines. To achieve this in the long run, students (i.e., faculty of the future) and current faculty need exposure to different disciplines. This cross-disciplinary approach to learning starts with students taking courses across departments outside their core discipline. The next step is to encourage and facilitate cross-disciplinary research and projects to solve complex problems.

At this stage, faculty and students are expected to bring in their disciplinary knowledge, collaborating and fostering dialogue between the disciplines. This can lead to the creation of cross-disciplinary courses – for example, a course titled 'Economic changes and class

structures as seen in Indian cinema, in collaboration with the economics, sociology, and film studies faculty'.

Incentivising such cross disciplinary courses, projects or centres needs additional funding to sustain it over multiple years. The National Science Foundation's (NSF) Integrative Graduate Education and Research Traineeship (IGERT) programme in the United States is a good example of substantial investment in having teachers and researchers of the future with a "breadth of skills, strengths, and understanding to work in an interdisciplinary environment while being well grounded with depth of knowledge in a major field".

On inter-disciplinary thought
Cross-disciplinary learning and practice expects collaboration between disciplines. On the other hand, interdisciplinary thinking and research requires drawing deeper connections between disciplines and the creation of integrated frameworks. Can cross-disciplinary research and practice really reach this ideal? In the experience of the writers of this article of the Integrated Graduate Research Traineeship (IGERT), this was achieved in some cross-disciplinary combinations such as biotechnology, medicine, chemistry and biology. However, for disciplines such as engineering and architecture, participating students reported challenges in finding publication venues for integrated research, securing and advancing in academic employment, as they did not fit in any particular discipline. Thus, to avoid interdisciplinarity from sliding into traditional practice, there is a need to overhaul funding and the publication ecosystem as well as faculty hiring/promoting practices.

The cost implications of all these changes will be enormous and staggered over several years. This will require reprioritising public spending. The governance and regulatory changes to achieve this also need to be carefully thought out. The fact is that we are trying to create a higher education structure that broadly resembles the American system at its zenith, which has organically grown over a century, in one of the most unregulated and competitive environments.

Key Themes:

1. Understanding Key Concepts:

Approach	Definition	Nature of Collaboration
Multidisciplinary	Co-existence of multiple disciplines without integration	Parallel but independent
Cross-disciplinary	Collaboration between disciplines without knowledge synthesis	Dialogue, not deep integration
Interdisciplinary	Deep integration of ideas and methods from different fields	Synthesized frameworks and new knowledge

2. NEP 2020 Vision & Goals:

- Establish **large multidisciplinary institutions** across districts by 2030.
- Promote **cross-disciplinary teaching and interdisciplinary research**.
- Shift pedagogy towards **discussion, debate, and research-oriented learning**.

3. Transformation Strategy:

A. Structural Shift – Building Multidisciplinary Campuses:

- **Add departments** in existing institutions (e.g., IITs expanding humanities).
- **Create university clusters** (e.g., arts + commerce + science colleges).
- Challenges:
    - 35% colleges are single-stream (e.g., B.Ed.), lacking variety.
    - Administrative integration is as critical as academic collaboration.

B. Geographical Access:

- Prefer**single multidisciplinary campus per district**over dispersed multi-campus models.
- Evidence: Public universities more **educationally efficient**, but **less research efficient** with multiple campuses.

4. Pedagogical Shift – Encouraging Cross-Disciplinary Practice:

- **Courses across disciplines**for students outside core areas.

- **Collaborative projects** and joint teaching (e.g., economics + cinema + sociology).
- Requires **faculty openness**, structural support, and **long-term funding**.

Global Example:

- **NSF's IGERT (USA):** Funded interdisciplinary training for researchers with depth and breadth across domains.

5. Towards Interdisciplinary Thought:

- Encourages **integrated frameworks** to solve complex societal issues.
- Hurdles:
  - Lack of **funding, journals**, and **career incentives** for interdisciplinary research.
  - Difficulty in **academic recognition** and hiring when research doesn't fit into traditional disciplines.

Governance & Funding Implications:

- Requires **restructuring of funding models, academic regulations,** and **promotion policies.**
- Substantial **public investment** and **policy coherence** are essential.
- India attempts to **replicate the American higher education model—**organically evolved—within a short span and a highly regulated environment.

<table>
<tr><td>**UPSC Mains Practice Question**</td></tr>
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Ques : The National Education Policy, 2020 seeks to foster a culture of multidisciplinary and interdisciplinary learning and research in Indian universities. Critically examine the structural, pedagogical, and policy-level changes required to realize this vision.**(250 words)**

With India's senior citizen population expected to double by 2050, a new sectorAge-Techhas emerged to address the multi-dimensional needs of the elderly. This includes emotional wellbeing, healthcare, employability, and digital literacy, using technology-driven solutions. The article highlights how startups, researchers, and civil society are tackling the challenges of aging in a rapidly digitizing India.

In the age of age-tech

With social structures changing and families shrinking, many senior citizens are nagged by questions on how to productively use the silver years without feeling isolated or burdening others. **Shilpa Elizabeth** looks at age-tech, a new and emerging sector that harnesses technology to seek some answers

Illustration: SEBASTIAN FRANCIS

Raghavendra (name changed), 73, is part of around six WhatsApp groups for the elderly. An electrical engineer who spent more than 30 years in Mumbai, he moved to Bengaluru post-retirement to be with his daughter. In a city of 1.4 crore people, the septuagenarian was starting to feel lonely given his daughter's busy work schedule and his wife's demise eight years ago. Then, he found his tribe online.

"They get me a cake for Christmas. I get Tirupati laddus for them. We are all now planning a trip together to Vietnam," says a very cheerful Raghavendra, during a meetup held by Sukoon Unlimited, a city-based start-up building a community for seniors.

New research area

Research on longevity has been receiving unprecedented attention across the world. In 2024, the Indian Institute of Science (IISc) announced the launch of the Longevity India Initiative, a project focused on efforts to extend human 'health span' and combat ageing-related challenges. Maverick millionaires like Bryan Johnson have even been attempting anti-ageing experiments.

But the elderly in India have been at an intersecting, or rather puzzling, cross-section. With social structures changing and families shrinking to nuclear, how to productively use the silver years without feeling isolated and not burdening others has been a question troubling many lately.

Age-tech, a new and emerging sector, hopes to answer this question with the help of technology and ease the problems of people like Raghavendra.

Age-tech start-ups

Neeraj Sagar, founder of Wisdom Circle, started an online group of age-tech founders in India about two years ago. The group had its first offline meetup last year in Bengaluru where almost 40 founders showed up.

"In a year that number has become 100," says Sagar.

According to estimates, India currently has about 15 crore senior citizens (people above 60 years), a number which is expected to more than double to 32 crore by 2050. A changing demographic means the average age going up and the market needs shifting, prodding entrepreneurs to be early movers in the space. From physical health to emotional well-being to cognitive skills to the employability of seniors, age-tech start-ups attempt to address a spectrum of challenges faced by seniors.

Eliminating loneliness

In 2022, WHO revealed that 1 in 4 older people experience social isolation, seriously impacting their health and longevity, with effects on mortality comparable to smoking, and obesity.

Vibha Singal, founder of Sukoon Unlimited,

> When somebody reports having memory issues, you just brush it off as something normal with ageing. But ways to assess if it is normal ageing or accelerated ageing is still not prevalent in India.
> **ISSAC JOHN**
> Co-founder of cognitive health start-up Ivory

points out that people with ageing parents often give importance to the latter's physical health and financial and logistical needs, but are not always in a position to help them with their emotional wellbeing.

"When a person is 60, their kids are between the age of 30 and 40 trying to build their own families and careers."

There is also a growing segment of elders who are financially independent and prefer being on their own rather than moving in with their children or uprooting their lives to a different place, Singal notes.

"We see if we can help the parents beat loneliness so that they age slower. Finding purpose and community are the fulcrums to beating loneliness. That's what Sukoon is out to do."

Started in 2024, Sukoon, according to Singal, is India's first platform for seniors by seniors offering services such as emotional support, counselling, group therapies, volunteering opportunities, and concierge services.

Both the service providers and service takers are people above 50 years old. "When a service provider is a senior citizen, it gives them purpose. And if the service taker is a senior citizen, there is a sense of community," Singal notes.

From 200 members in the first month, the community has grown to 6,000 users spread across 400 cities and towns in a year with the average age between 58 and 68. Around 60% of the users are men and 40% women. Some of the most discussed concerns include children's reluctance to marry, and loss of spouse.

The company has also invested in a proprietary AI tool which can respond to more than 100 languages. Singhal notes that more than 65% of the community members talk to it. There have been instances of users talking to it like a friend, naming it and even spending hours with it.

Fifty-nine-year-old Miranda (name changed), a finance professional at a corporate firm, dialled a *Sarathi* at Sukoon when she couldn't come to terms with the thought of retiring in a year.

"The thought of being without a job made me feel purposeless," she says.

Employment opportunities

Miranda's concerns are shared by many. Neeraj Sagar of Wisdom Circle notes that not only is there a significant population who prefer to work even after retiring from their permanent roles, but also quite a few companies who are looking to tap into the experience of the elderly.

Wisdom Circle, which helps retired professionals find employment opportunities, has been around for three years now. Around 95,000 people and 1,500 companies have registered on the platform which has listed about 2,500 roles.

According to Sagar, the demand mostly comes from small and medium businesses and start-ups who are looking to hire specialists for a few days of the week. As far as the elders are concerned, he says, there is a lot more openness to hybrid roles.

But what motivates people to continue working post-retirement? Is it the money or is it something more?

"Money is important to everyone, not always to meet the financial ends, but to feel valued," says Sagar.

It's often a bid to continue to feel respected and relevant, backed by the impulse to impart

the skills they have acquired over a lifetime and give back to society.

"What we are observing is that people who are worth way more are applying for roles that are not paying them as much. So, staying relevant takes priority over getting paid highly. We are also seeing a lot of people apply to nonprofit roles which pay lesser."

Keeping the brain sharp

In 2023, a study by Jinkook Lee and others showed that more than 80 lakh Indians suffer from dementia. As the Indian population looks at an increased lifespan and the elderly population is estimated to be 20% of the total population by 2050, the burden of neurodegenerative diseases is also high.

"Typically, when somebody in your family reports having memory issues, you just brush it off as something normal with ageing," points out Issac John, cofounder of cognitive health start-up Ivory. "But ways to assess if it is normal ageing or accelerated ageing is still not prevalent in India."

Co-founded by John and Rahul Krishnan, Ivory offers neuroscience-backed assessments that claim to help keep the brain sharp and identify neurodegenerative risks early. The duo who up close witnessed close relatives suffering from neurodegenerative diseases wanted to build a differentiated product for the segment aged above 45 years.

The users first take a simple assessment which tells them their cognitive age. People who are found at risk are suggested to take up a clinical grade assessment.

"We work very closely with the medium and high-risk customers, get them to do a health and lifestyle profiling and recommend things that they need to change in their life, along with a personalized cognitive brain training session available for them on the app," John explains.

The app currently has about 30,000 users with two-third of them females and 60% from tier-I cities.

Easy on the knees

When it comes to physical health, orthopaedics forms a crucial need for the elderly. Statistics show that around 50% of the senior population need assistance with basic tasks like sit-to-stand.

"In the larger scheme of things, the inability to carry out this function by yourself has two implications. Apart from the physical exhaustion and the strain, there is the risk that if you do not perform it safely, you could either fall into or out of the chair and end up injuring yourself," notes Sanchit Jhunjhunwala, co-founder at Translead Medtech, a deep-tech spin-off from IISc, Bengaluru.

"This also leads to a hesitation to participate socially, culturally and economically. Even at home, you may stop yourself from drinking another glass of water because you will need to stand up, go to the washroom, sit down, stand up again, come back and sit down."

The start-up has designed an assistive chair which offers support while performing the actions of sitting down and standing up, without any electrical power or sensors. The chair seat gently pushes the user while trying to stand up. While sitting down, the sharp rise of the seat drops slowly.

"There has been a 2.5-fold growth in the num-

ber of knee replacements done in the last five years. And you're looking at upwards of 5 lakh such surgeries happening," Jhunjhunwala puts it in perspective.

He notes that UNSDG recommendations talk about reserving 5% of seating in public space for accessibility.

"You need to make these elements functional as well. That's where we come in. We are looking at a need of 25 million such assisted chairs in public spaces and 8 million in homes, offices, and so on."

The start-up, which is getting ready to begin its shipments in June, has also an assistive commode for the elderly in the pipeline.

Tech that alienates

While developments in technology to assist older people are welcomed, one concern among experts is that, at times, the real needs of the elderly take a backseat to the fascination with technology and its potential.

Arvind Kasthuri, head of the geriatric unit at St John's Medical College, Bengaluru, recollects his experience of working with a group which was developing wearables for older people years ago and how the team was more focused on what the devices could do rather than what the user wanted or what was feasible.

"Many of them are so kicked with the technology that they cannot resist the temptation," he warns.

"They have to mesh their technologies into the real world of healthcare and see how the patient flows are. Looking at technologies from a patient flow point of view, and then trying to plug those gaps is better than working at it from the technology end and seeing what all those technologies can actually achieve."

Preetesh Kiran, Associate Professor at the Department of Community Health, St John's Medical College, adds that there is a clear urban-rural divide when it comes to age-tech. He also points out that a large number of seniors find it a challenge to adapt to new technologies.

Keeping pace is hard

"Digitisation is great news. But it is also happening at a very rapid pace, excluding key demography in our country, which is our elders," says Bilal Zaidi, founder of Elderra, which helps seniors learn digital tools.

Zaidi recollects how calls from his elderly parents seeking help to book autorickshaws or groceries via apps increased over the last few years. Hailing autos down the road became almost impossible for them, and the *krana* store that used to deliver the groceries to their shut shop in the onslaught of quick commerce.

"The other challenge is, in the absence of an understanding of technology, the elderly population is very vulnerable to scams," adds Zaidi.

Govt. should join in

The tech divide becomes even more stark in rural areas. On top of it, age-tech's focus on financially independent seniors living in cities makes the services unaffordable for the larger elderly population. The government and larger corporates should join hands with the startups to make the services accessible for a larger populace, suggests Susan Barton, an eldercare specialist in Bengaluru.

Key Highlights:

Demographic Shift & Need for Age-Tech

- India has 15 crore+ senior citizens (aged 60+), expected to rise to 32 crore by 2050.
- Shrinking family structures, increasing life expectancy, and urban loneliness demand tech-enabled eldercare solutions.

What is Age-Tech?

- A sector focusing on using technology to improve the quality of life for the elderly.
- Encompasses areas like healthcare, social connectivity, employability, and cognitive support.

Major Age-Tech Innovations:

Area	Example Startups	Services Offered
Social Connection & Emotional Well-being	Sukoon Unlimited	Peer support groups, counselling, AI companions in 100+ languages
Employment & Purposeful Engagement	Wisdom Circle	Post-retirement job matching for seniors with SMEs, startups
Cognitive Health	Ivory	Neuroscience-backed cognitive assessments and training
Mobility Support	Translead Medtech	Assistive chairs for sit-stand support without electricity
Digital Literacy	Elderra	Digital skills training for elderly to navigate apps and avoid scams

Challenges Identified:

Tech Alienation

- Solutions often driven by technological fascination, not user needs.
- Many products are not senior-friendly due to complexity or poor integration into real-world care.

Digital Divide

- Urban-rural disparity in access and tech-literacy.
- Seniors are vulnerable to digital exclusion and online frauds.

Affordability & Accessibility

- Most services cater to financially stable urban seniors.
- Excludes large elderly populations in rural/low-income settings.

Expert Insights:

- Arvind Kasthuri, St. John's Medical College: Focus should shift from tech potential to real-world patient integration.
- Bilal Zaidi, Elderra: Seniors are at risk of digital isolation due to fast digitisation.
- Susan Barton, Eldercare Specialist: Recommends government-private collaboration to scale and subsidise eldercare solutions.

Government Involvement – A Missing Piece:

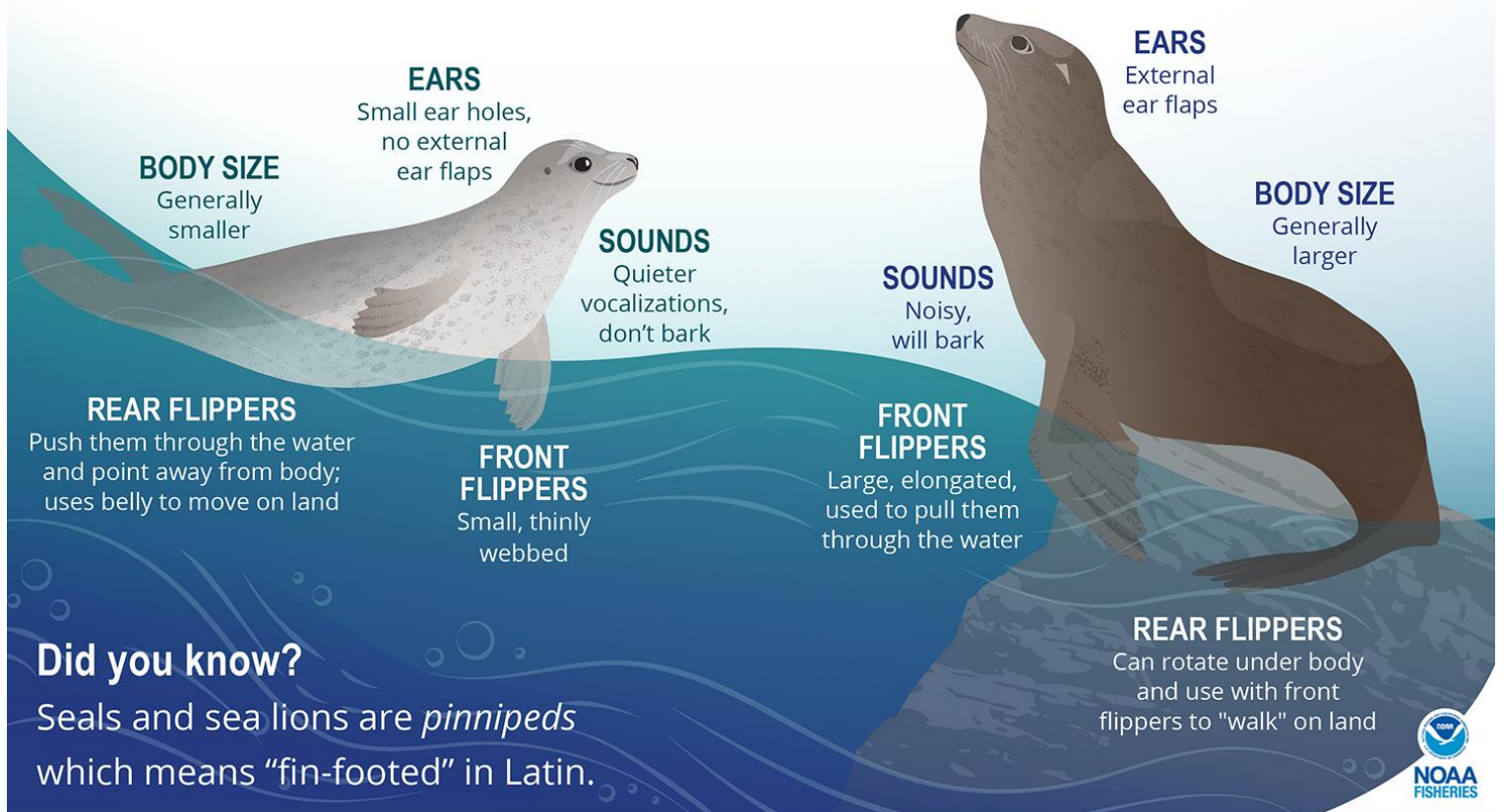| Issue	Need
Rising elder population	A national policy framework for age-tech integration
Urban-rural divide	Digital outreach and inclusion programs for rural seniors
Economic support	Subsidies for affordable eldercare technologies
Health risks	Early screening and public health infrastructure for cognitive & mobility issues

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UPSC Mains Practice Question

Ques :"The emerging age-tech sector offers a transformative potential for addressing challenges faced by India's elderly. However, inclusivity and accessibility remain critical concerns."Discuss in the context of India's demographic transition.*(250 words)*

In News : Sea Lions

An algal bloom along the California coast has resulted in a neurotoxin release, which is causing sea lions to become aggressive, leading to attacks on beachgoers and surfers.

SEAL

BODY SIZE
Generally smaller

EARS
Small ear holes, no external ear flaps

SOUNDS
Quieter vocalizations, don't bark

REAR FLIPPERS
Push them through the water and point away from body; uses belly to move on land

FRONT FLIPPERS
Small, thinly webbed

Did you know?
Seals and sea lions are *pinnipeds* which means "fin-footed" in Latin.

SEA LION

EARS
External ear flaps

BODY SIZE
Generally larger

SOUNDS
Noisy, will bark

FRONT FLIPPERS
Large, elongated, used to pull them through the water

REAR FLIPPERS
Can rotate under body and use with front flippers to "walk" on land

NOAA FISHERIES

About Sea Lions

- Family: Otariidae, which includes five species – California, Northern, Southern, Australian, and New Zealand sea lions.
- Habitat: Found along the Western coasts of North America, from southeast Alaska to central Mexico, mainly on rocky shores and sandy beaches.
- Physical Traits: They possess external ear flaps, long foreflippers, mane-like fur in males, and can weigh up to 1200 pounds (approx. 545 kg).

- Behavior: Typically non-aggressive and social, sea lions are now showing lethal aggression due to neurotoxin-induced neurological disorders.
- Lifespan: The Average lifespan is 20 to 30 years.

What is Causing the Sea Lions' Aggression?

- Sea lions, typically non-aggressive marine mammals, have shown violent and erratic behaviour, attributed to exposure to a neurotoxin called domoic acid.
- Domoic acid is secreted by the toxic diatom algae Pseudo-nitzschia, which blooms excessively under nutrient-rich conditions in the ocean.
- Once released, this neurotoxin enters the marine food chain, affecting not just small fish, but also larger predators like sea lions that consume these fish.

UPSC PrelimsPractice Question

Ques :Consider the following statements about sea lions:

1. Sea lions are part of the Pinnipedia family and are found only in the Arctic region.

2. They have external ear flaps and long foreflippers.

3. Male sea lions have mane-like fur and can weigh more than 500 kg.

Which of the statements given above is/are correct?

(a) 2 and 3 only

(b) 1 and 2 only

(c) 1 and 3 only

(d) 1, 2 and 3

Ans : a)

The Beijing India Report as milestone and opportunity

"It breaks my heart to see girls dropping out of school due to climate change and migration," says a *didi* from Dhanelikanhar village in Kanker, Chhattisgarh. "This generation was supposed to do better." It has been 30 years since the adoption of the Beijing Declaration and Platform for Action, a landmark international agenda outlining an action plan for gender equality across 12 dimensions such as education, health, economics and politics. It has helped India focus attention on gender perspectives in policies, pass the Protection of Women from Domestic Violence Act and the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) or POSH Act, and push for the economic empowerment of women. Yet, the implementation of these laws often falls short, resulting in a gap between fundamental rights and women's lived experiences.

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An important integration

Gender inequality and the climate crisis are one of the greatest challenges of today, which the quote above highlights. It also shows the need to integrate 'gender and climate' especially for rural communities. The inadequacy of a robust climate lens in the Beijing India Report 2024 (India's Report on Beijing+30) is a significant opportunity – integrating gender and climate considerations is not just an imperative for achieving gender equality but is also essential for India's sustainable and resilient future and human rights.

Existing inequalities, especially in India's rural areas, leave women and girls with less access to resources and decision-making power. They are often concentrated in the agrarian economy. The link between climate change and issues among women due to extreme heat exposure, malnutrition caused by droughts, food insecurity, and displacement leading to a higher rate of hysterectomies, infertility and menstrual health concerns is an area of concern. Heat stress and/or extreme precipitation affect/s agriculture productivity, human productivity and ecosystem functionality, causing price fluctuations, loss in income, distress migration, damaged infrastructure and hampered services for women. It results in nearly 33% losses in income, especially from non-farm livelihood streams.

If we look at climate policies and finance, they are primarily directed towards clean energy, green transport and energy efficiency. According to the Food and Agriculture Organization of the United Nations, approximately 6% of climate policies mention women, 1% mention people living in poverty and 6% mention farmers. At the household or family level, the increased burden of unpaid care work (water collection, fuel gathering) due to climate-related resource scarcity affects women. The daily workload of women in India exceeds eight hours, with a staggering 71% unpaid work hours, according to a new report from Arsht-Rock. It warns that without efforts to combat climate change, the time women spend on unpaid tasks could reach 8.3 hours a day by 2050.

In India, over 50% of pregnant women are anaemic, which is an underlying cause or contributing factor to maternal deaths in India. The lack of consistent access to food affects women's health, as those experiencing food insecurity are 1.6 times more likely to suffer from anaemia when compared to their food-secure counterparts. In India, which has the highest rate of intimate partner violence among the countries in the study, there was a clear correlation between temperature rise and abuse: for each rise in degree Celsius, physical violence rose by 8% and sexual violence by 7.3%.

The role of women in adaptation

Women play a vital role in climate adaptation and mitigation. Their traditional knowledge of sustainable agriculture and natural resource management is crucial in safeguarding the ecosystem in rural areas. Rural indigenous women are primarily responsible for preserving traditional climate-resilient seeds suitable for local climatic conditions. These need to be harnessed in the local decision-making processes and leadership in women-led climate initiatives. Women are responsible for half of the world's food production and have organically adapted to climate change by using sustainable agriculture. There are many formal and informal women collectives that have shared workloads, have worked on increasing productivity, and are the first responders in disasters and safeguarding the local ecosystems. For women in urban areas, waste management and pollution could be the priorities, but for indigenous women, the three 'M's, i.e., Mahua (forest-based livelihoods), Mao (safety and security due to conflicts over resources) and Migration (distress migration and the related challenges and support required), could be priorities.

The Beijing India Report has an inadequate climate-gender connection, which must be rectified. It must include a robust climate lens with a focus on having gender-responsive climate action, developing indicators and data related to the gendered impacts of climate change and also building insights.

There needs to be a special focus on climate budgeting, which generally results in two things – greenwashing and using women as conduits to redirect resources. Hence, it is necessary to design and use gender-audited and gender-responsive climate budgets. Women in rural areas must have platforms to empower them in climate decision-making. A need for climate support hubs, especially for disaster support, health and women's safety services, awareness of migration risks, and protection of sexual and reproductive rights is strongly felt by women.

Facilitating community climate consultations that are inclusive of women, and promoting women's leadership in both green energy initiatives and local political leadership on climate action are crucial. By investing in women's education and capacity in climate action and promoting women-led climate initiatives, the consequences of gender invisibility can be turned around. Human-animal conflict also needs to be explored with a gender lens. More aggressive data and research dedicated to climate and gender is needed on the gender-climate nexus in India. Closing the gender gap in agricultural resources could significantly increase food production, with potential gains of 20%-30% in farm yields and the capacity to feed 100 million to 150 million more people.

At the policy level, a gender responsive National Action Plan on Climate Change (NAPCC), State Action Plan on Climate Change (SAPCC) and a percolation to the grass-root level needs to be ensured. A special focus on strengthening disaster preparedness and response with a focus on vulnerable women, leveraging public services, addressing trafficking risks, and reaching out to geriatric women are crucial. There need to be immediate and aggressive policies on livelihood diversification by promoting non-farm livelihoods and skilling opportunities for women to adapt to the impacts of climate change on agriculture.

Private sector participation is important

Green funds must focus on fostering women-led and women-supportive innovations, having technological interventions, and ensuring women's participation in a green economic transition, by developing green businesses, products and services. More funds must be redirected to human capital at the forefront of climate adaptation and mitigation space, especially in climate-vulnerable areas, to build resilience. The role of the private sector is important as it will help in investing in climate-related projects that specifically empower women, promote gender-inclusive practices and processes, and provide access to climate-resilient technologies and services that benefit women disproportionately affected by climate change impacts.

There need to be co-operative partnerships between government, civil society, research institutions, the private sector, citizens and international organisations. In all these the emphasis must be on knowledge sharing, regular communication, consultations, capacity exchange, recognition of champions and best practices, and collective advocacy to empower women as leaders in building climate resilience for a more just and sustainable future in India.

The report has an inadequate 'climate-gender' connection, which must be rectified with policy and ground-level changes

Paper 02: Social Justice

UPSC Mains Practice Question: Climate change has exacerbated existing gender inequalities, particularly in India's rural areas. Critically examine the need for integrating a gender-responsive approach in India's climate policies and planning. (250 words)

Context :

The **Beijing Declaration and Platform for Action (1995)** marks 30 years of advancing gender equality globally. India's 2024 review (Beijing+30 Report) highlights progress in gender-sensitive laws and policies but **falls short in integrating climate change impacts on women**, especially in rural and vulnerable populations. This article critiques this gap and presents a roadmap for **gender-responsive climate action**.

Why It Matters:

- India faces **dual challenges**: **climate vulnerability** and **persistent gender inequality**.
- Without **gender-responsive climate planning**, women – particularly in rural and indigenous communities – are **disproportionately affected**.
- Climate change worsens issues such as **food insecurity, migration, violence, and unpaid work**, demanding urgent **policy integration** of gender and climate dimensions.

Key Issues Highlighted:

1. Climate Change Intensifies Gender Inequality

- **Heat stress, droughts, and food insecurity** lead to:
  - Rise in **anaemia**, **maternal deaths**, **menstrual and reproductive health** problems.
  - Increased **unpaid care burden** (water/fuel collection).
  - **Distress migration** disrupting education and increasing trafficking risks.
  - Link between **temperature rise and gender-based violence** (e.g., 1°C rise → 8% rise in physical abuse).

2. Gender Blind Climate Policy & Finance

- Only **6% of global climate policies** mention women (FAO).
- Most funds directed to **green tech/clean energy**, ignoring **social vulnerability**.
- **Climate budgeting** often suffers from:
  - **Greenwashing**.
  - Tokenistic inclusion of women as **implementers**, not **decision-makers**.

3. Missed Opportunities in the Beijing+30 Report

- Lack of a strong **climate-gender lens**.
- Failure to incorporate **grassroots women's voices** and localized vulnerabilities.

The Role of Women in Climate Adaptation:

Role	Contribution
Indigenous Women	Preserve **climate-resilient seeds**, manage forests
Rural Women Collectives	Share workloads, act as **first responders** in climate disasters
Women in Urban Areas	Lead on **waste management, pollution awareness**
Local Leadership	Offer **contextual solutions** to livelihood and resource access

Policy-Level Recommendations:

Need Area	Policy Suggestions
Data & Indicators	Develop **gender-climate impact metrics** and monitor progress
NAPCC/SAPCC	Make climate action **gender-responsive** at all levels
Livelihood Diversification	Invest in **non-farm skill training** for climate-vulnerable women
Climate Budgets	Use **gender audits** to ensure equitable allocation
Disaster Preparedness	Include **geriatric, migrant, and pregnant women** in planning

Human-Animal Conflict   Study gendered impact on resource conflict zones

Private Sector & Civil Society Role:

- Green finance must fund **women-led innovations** and **green businesses**.
- Promote access to **climate-resilient technologies** tailored to women's needs.
- Foster **PPP models** (Public-Private Partnerships) that ensure women's **representation and ownership** in the green economy.

Global Best Practices to Emulate:

- **Gender Climate Budgeting** – as practiced in Bangladesh and some EU countries.
- **Community Climate Consultations** – inclusive of women-led forums (e.g., in Uganda).
- **IGERT Model (USA)** – for interdisciplinary climate education and research.