

# Headlines

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**Change is inevitable, but it is  
in us to control its content  
and direction.**

-Mahatma Gandhi



# Industrial output growth slows to 2.9% in Feb.

**Ashokamithran T.**

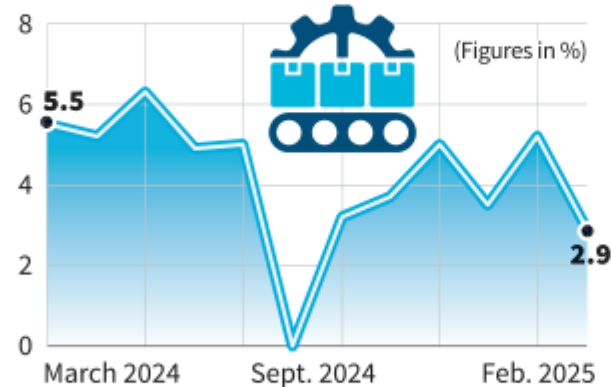
MUMBAI

The Index of Industrial Production (IIP) grew at its slowest rate in six months, clocking a pace of 2.9% in February, dragged down by decelerating growth across all sectors, according to data from the Ministry of Statistics and Programme Implementation. The IIP's growth rate came in much lower than the 4% estimated by Reuters.

"A combination of high base effects along with a slowing growth in mining and manufacturing sectors

## Slackening growth

India's industrial production growth decelerated to a six-month low of 2.9 per cent in February 2025



The chart shows India's rate of production growth as per the IIP from March 2024 to February 2025

SOURCE: MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION

led to the growth falling in February 2025," said Paras Jasrai, associate director at India Ratings and Research.

Mining sector growth slowed to 1.6% in February, as against 8.1% in the same month of the previous year. Manufacturing sector

grew at a pace of 2.9%, as against 4.9% in the year ago period. Electricity production dipped to 3.6% this February, from 7.6% a year ago.

According to use-based classification, barring capital goods, all goods categories registered a slower output growth in February 2025, compared to the same month last year. Capital goods output grew the fastest at 8.2%, as against 1.7% in the corresponding period last year.

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» **PAGE 10**



## **What is the Index of Industrial Production?**

- **IIP is an indicator that measures the changes in the volume of production of industrial products during a given period.**
- **It is compiled and published monthly by the Central Statistical Organisation (CSO), Ministry of Statistics and Programme Implementation.**
- **It is a composite indicator that measures the growth rate of industry groups classified under:**
  - **Broad sectors, namely, Mining, Manufacturing, and Electricity.**
  - **Use-based sectors, namely Basic Goods, Capital Goods, and Intermediate Goods.**
- **Base Year for IIP is 2011-2012.**

## **Eight Core Sectors:**

- **These comprise 40.27% of the weight of items included in the Index of Industrial Production (IIP).**
- **The eight core sector industries in decreasing order of their weightage: Refinery Products> Electricity> Steel> Coal> Crude Oil> Natural Gas> Cement> Fertilizers.**
- **The ICI series with base 2011-12 will continue to have eight core industries.**
- **IIP is compiled and published monthly by the Central Statistical Organisation (CSO) Ministry of Statistics and Programme Implementation six weeks after the reference month ends.**
- **However, ICI is compiled and released by Office of the Economic Adviser (OEA), Department of Industrial Policy & Promotion (DIPP), and Ministry of Commerce & Industry.**



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Description



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Prashant tiwari

Education

Educator at StudyIQ IAS

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# China imposes 125% tariff on U.S. goods

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## Tit-for-tat

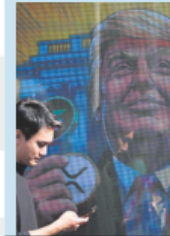
**April 2:** As part of 'Liberation day', Trump imposed an additional 34% tariff on all Chinese imports, **bringing the total to 54%**

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**April 7:** Trump retaliated with **50% more tariff**, raising total tariffs on Chinese imports to 104%

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**April 9:** Trump once again raised the **total tariffs on Chinese imports to 145%**



**April 11:** China responded by hiking its total tariffs on U.S. imports to 125%

## Reuters

BEIJING

China, on Friday, continued its tit-for-tat move against the Trump administration's tariffs by hiking its levies on imports from the U.S. to 125% against duties of 145% by America even as it evinced interest in dialogue with Washington to resolve the impasse.

China's Customs Tariff Commission said, "Even if the U.S. imposes higher tariffs, it would no longer make economic sense and ultimately go down as a

joke in world economic history." "Given that it's already impossible for the Chinese market to accept U.S. imports at the current tariff level, if the United States imposes further tariffs on Chinese products, China will ignore it," it said.

Yet, should the U.S. persist in substantially undermining China's interests, Beijing will take firm countermeasures, it added.

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**XI REACHES OUT TO EU**

» **PAGE 14**



# Tit-for-tat

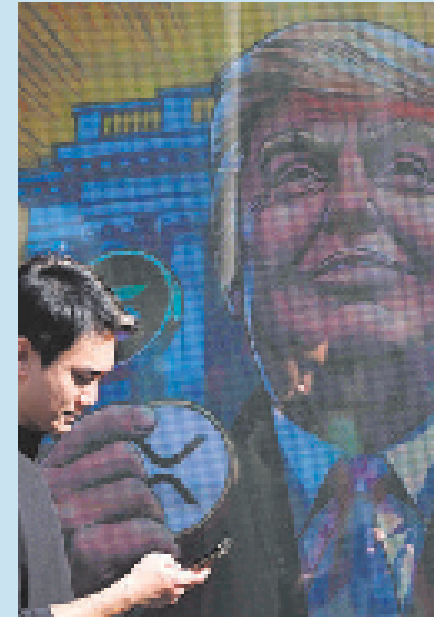
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# Indian EVMs not connected to Internet or Wi-Fi, says EC after U.S. official's comments

Page No. 12, GS 3

**The Hindu Bureau**  
NEW DELHI

Against the backdrop of claims by U.S. Director of National Intelligence Tulsi Gabbard that electronic voting systems are vulnerable to hacking, the Election Commission on Friday said India uses electronic voting machines (EVM) which work like “simple, correct and accurate calculators” and cannot be connected to either the Internet, Wi-Fi, or Infrared.

EC sources said some countries use electronic voting systems which are a mix of multiple systems, machines, and processes, including various private networks like the Internet. In India, while pressing the button of choice, the voter can also see the corresponding VVPAT slips for enhancing his or her satisfaction and confidence.

Counting of any number of votes (even 100 crores) can be completed in less than a day and no one can tamper with these machines which are either stored in a strong room or with an authorised person



**Tried and tested:** EVMs have stood legal scrutiny by the SC and are invariably checked by political parties, says EC. K. MURALI KUMAR

at any given point of time, the sources added.

In India, the EVMs have stood legal scrutiny by the Supreme Court and are invariably checked by political parties at various stages. They pointed out that more than five crore paper trail machine slips have been verified and matched during counting in front of political parties.

Ms. Gabbard said on Thursday that the U.S. Cabinet has found “evidence of how these electronic voting systems have been vulnerable to hackers for a very long time and vulnerable to exploitation to manipulate the results of the votes being cast”. She ad-

ded that the findings mandate the use of paper ballots across the country so that voters can have faith in the integrity of the U.S. elections.

Last year, tech czar Elon Musk had called for the elimination of EVMs, citing the risk of being hacked by humans or artificial intelligence (AI).

The then Chief Election Commissioner Rajiv Kumar had in January responded to Mr. Musk's claim saying, “A global IT expert said EVMs can be hacked while our elections were going on. They [U.S.] don't have EVMs, they have electronic voting mechanisms.”



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## **Content.**

- **EVM is a device used to record votes electronically. They were first used in the Paravur Assembly Constituency of Kerala in the year 1982.**
- **Since 1998, the Election Commission has increasingly used EMVs instead of ballot boxes.**
- **In 2003, all state elections and by-elections were held using EVMs.**
- **Encouraged by this, in 2004, the Commission took a historic decision to use only EVMs for the Lok Sabha elections.**
- **Development: It has been devised and designed by the Technical Experts Committee (TEC) of the Election Commission in collaboration with two Public Sector undertakings: Bharat Electronics Ltd, Bangalore (under Ministry of Defence ) and Electronic Corporation of India Ltd, Hyderabad (under Department of Atomic Energy).**





## 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.



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- It is an air launched 1,000 kg class glide bomb capable of hitting targets at long distance.
- Features
- It is an Air to Surface LRGB with conventional warheads to destroy enemy air strips, bunkers, hard installations, buildings etc.
- It is designed to integrate with fighter aircrafts.
- It consists of an Inertial Navigation based guidance system with Digital Control.
- GAURAV has been designed and developed indigenously by the Research Centre Imarat (RCI), Hyderabad.
- After being launched, the glide bomb steers towards the target using a highly accurate hybrid navigation scheme with a combination of INS and GPS data.
- During the flight test, the glide bomb hit the target erected at Long Wheeler's island with pinpoint accuracy.
- Complete flight data during the test launch was captured by Telemetry and Electro optical tracking systems deployed by Integrated Test Range along the coastline.



# 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 *didid* 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.

## 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



**Neeraja Kudrimoti**

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staggering 71% unpaid work hours, according to a new report from Arsh-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.

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



- **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.**
- **Gender inequality and the climate crisis are one of the greatest challenges of today, which the quote above highlights.**
- **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.**



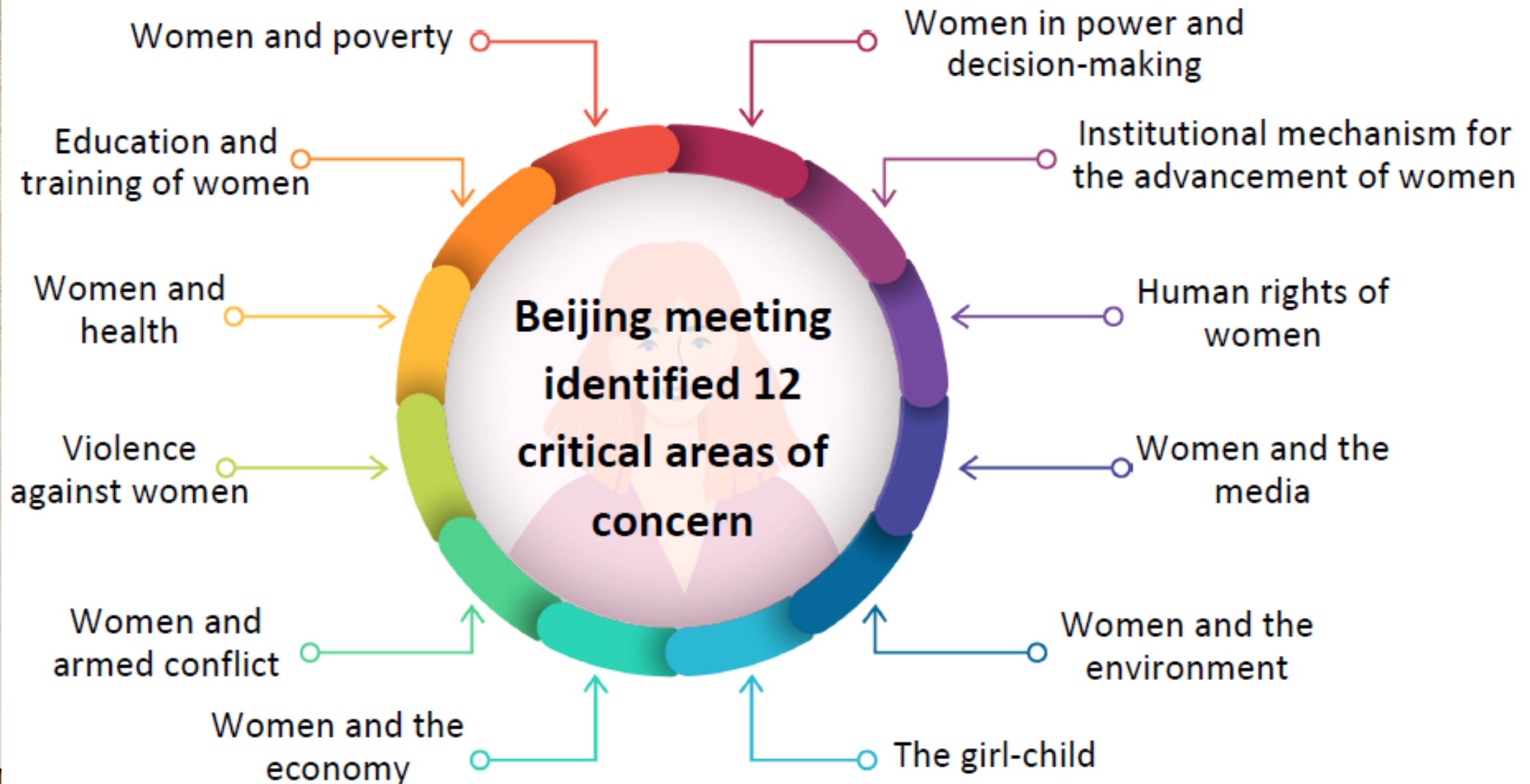
## **Content.**

### **Beijing Declaration and Platform for Action (1995)**

- **It was adopted at the Fourth World Conference on Women (United Nations) in 1995, to provide a comprehensive framework for gender equality.**
- **It emphasized women's rights as human rights, advocating for reforms in education, political participation, economic empowerment, health, and protection from violence.**
- **Other International Treaties Where India is a Signatory:**
  - **Universal Declaration of Human Rights (1948);**
  - **International Covenant on Civil and Political Rights (ICCPR, 1966);**
  - **Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW, 1979);**
  - **United Nations Convention Against Corruption (2003);**
  - **Agenda 2030 for Sustainable Development;**
  - **India is a signatory to all above treaties, including the Beijing Declaration and Platform for Action.**



# About Beijing declaration and Platform for Action





## **Content.**

- **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.**
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- **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.**



# Giving shape to the university of the future

**T**he 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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**Parag Wanknis**

is a faculty of economics at the Dr. B.R. Ambedkar University Delhi

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.



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- **Phasing out single stream institutes of higher education (IHE) to establish a multidisciplinary campus can work**
- **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.**



## Dire efforts

The conservation argument for resurrecting dire wolf is not credible

**C**olossal Biosciences is an American company with an unusual marketing line: combining genomics with conservation – not in its traditional form, but through de-extinction, which is resurrecting species extinct for thousands of years. Leading this project is Harvard geneticist George Church, a prominent promoter of the company, who aims to bring back the woolly mammoth, a distant ancestor of the elephant. The stated logic is to combat global warming. During the Pleistocene Ice Ages, the mammoth roamed lush grasslands across the tundra. Until its extinction around 5,000 years ago, the Arctic tundra also supported large populations of bison, wolves, cave lions, and giant deer. As the climate warmed, these species disappeared, and the grasslands gave way to shrubbery and sheets of snow. As temperatures rise, permafrost begins to disappear, resulting in high emissions of methane, a more potent greenhouse gas than carbon dioxide. To prevent this, some scientists at a Siberian park have been transporting large animals that are resistant to cold to see if their foraging can restore the grasslands. Grass absorbs less heat than the tall trees in a shrub forest – the dominant species – and therefore decelerates warming, but it cannot stop warming.

The woolly mammoth, though extinct, is seen as a potent weapon in this climate plan. Scientists at Colossal have extracted fragments of its DNA from fossils and reconstructed its genome. By comparing it to that of the modern elephant, they have edited specific genes to recreate mammoth-like traits, with the goal of eventually incubating a hybrid embryo in an elephant's womb. Scientists have also experimented with the dire wolf, an extinct relative of the gray wolf, and birthed three snow-white wolves. However, this claim has yet to pass rigorous peer review. Critics point out that only 20 genes were edited, and what has been created is, in essence, a "strange-looking gray wolf". Despite such criticisms, the technological achievement is a testament to the ability to engineer precision edits to the genome. The work of Chinese scientist He Jiankui, who claimed to have produced gene-edited human babies, remains controversial. Colossal may be credited for its genomics work, but the claim that it is reviving species for conservation is not credible. Thousands of living species are vanishing due to habitat loss and human encroachment. Spending millions of dollars on speculative projects, whose benefits, if there are any, will fructify only over centuries, takes away resources from immediate conservation efforts. The scientific community must lay down strict guidelines on the use of gene-editing technology in applications other than health.

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## A MAMMOTH UNDERTAKING

- Harvard geneticists now seek to resurrect the long-gone **woolly mammoth** — the **shaggy Ice Age herbivore**, which lived on northern continents in climates of extreme cold, **went extinct about 4,000 years ago**, but genetics can return these

- Genetic tools enable scientists to **sequence the mammoth's genes found in fossils**, recreate and place these in the closely-related Asian elephant, for **the elephant** to then give birth to a woolly mammoth

- Reviving the woolly mammoth can help our ecological well-being — the **Siberian steppes** are composed of **permafrost** which contains vast amounts of **carbon**. With global warming, permafrost is melting, which could release more harmful carbon. But **permafrost temperature can be significantly lowered by reintroducing large animals like mammoths and bison**, which help the growth of steppe grasses that reflect sunlight back into the atmosphere, lowering heat absorption — and **reducing permafrost melt**





## **Content.**

- **The stated logic is to combat global warming. During the Pleistocene Ice Ages, the mammoth roamed lush grasslands across the tundra. Until its extinction around 5,000 years ago, the Arctic tundra also supported large populations of bison, wolves, cave lions, and giant deer.**
- **As the climate warmed, these species disappeared, and the grasslands gave way to shrubbery and sheets of snow. As temperatures rise, permafrost begins to disappear, resulting in high emissions of methane, a more potent greenhouse gas than carbon dioxide.**
- **To prevent this, some scientists at a Siberian park have been transporting large animals that are resistant to cold to see if their foraging can restore the grasslands.**
- **Grass absorbs less heat than the tall trees in a shrub forest — the dominant species — and therefore decelerates warming, but it cannot stop warming.**







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