

INDIA REJECTS J&J'S ATTEMPT TO EXTEND PATENT ON TB DRUG

Vital intervention

Bedaquiline, manufactured by J&J, is a crucial anti-TB drug



■ India has rejected J&J's appeal to extend its patent beyond July 2023

■ Currently priced at

around \$400 for a six-month treatment regimen, the prices are likely to fall

■ After July, generic producers like Lupin and Macleods are likely to manufacture the drug

■ Over 55,000 patients, in whom other drugs have stopped working, may benefit from Bedaquiline access

■ Till March 2020, only a little over 10,000 patients received the drug

In a victory for patients fighting for wider access to the crucial anti-tuberculosis drug Bedaquiline, the Indian Patent Office on Thursday rejected U.S. pharmaceutical giant Johnson & Johnson's attempt to extend its monopoly on manufacturing the drug in India beyond July 2023.

J&J's primary patents on Bedaquiline expire in July, paving the way for generic drug manufacturers such as Lupin and Macleods, among others, to

produce Bedaquiline, thus ensuring cheaper and wider access to the drug. Currently, Bedaquiline tablets are priced at \$400 per six-month treatment course. Bedaquiline is a crucial drug in the treatment of multi-drug resistant TB patients for whom the first-line drug treatment has stopped working.

Evergreening attempts

Since 2007, J&J had indulged in 'evergreening' — a strategy to extend the life of patents about to expire in order to retain revenues from them — by making multiple claims in its applications for patent extensions. When the firm filed for evergreening of its patent on fumarate salt (a formulation salt of Bedaquiline), the practice was challenged by TB survivors Nandita Venkatesan and Phumeza Tisile.

"We filed a patent challenge in 2019, because we wanted to ensure that safer, oral and efficacious drug Bedaquiline was available to all people who need it," Ms. Venkatesan told The Hindu.

Our attempt to break the monopoly of a pharma company over this life saving drug has been successful," Ms. Venkatesan said.

'No inventive step'

J&J had sought a patent extension on the basis of its claim that it had invented the method for making a derivative of quinoline in its salt form. However, in her order passed on Thursday, Latika Dawara, Assistant Controller of Patents and Designs, stated that the invention claimed was obvious and does not involve any inventive step, and is therefore non-patentable.

Section 3(d) of the Patents Act states that salt forms and derivatives of known substances are not patentable.

According to the latest available estimates, in 2019, over 55,000 patients who had developed multi-drug resistant TB could have benefited from access to Bedaquiline. As of March 2020, only a little over 10,000 of these patients had accessed the drug.

COVID-19 VACCINE PRECAUTIONARY DOSE UPTAKE STANDS AT 27%

Despite the high coverage of primary COVID vaccination (97%) and second dose (90%), India's precautionary dose uptake stands at 27% (as on March 23, 2023), according to data released by the Union Health Ministry. India has been currently registering a rise in new COVID-19 cases and now contributes to 1% of the global surge tally that has the U.S. (19.2%), Russia (12.6%) and China (8.3%) in the lead.

The Union Health Ministry maintained that Omicron and its sub-lineages continue to be the predominant variants with no evidence of an increase in hospitalisation and/or mortality.

"All currently circulating variants are sub-variants of Omicron," Health Secretary Rajesh Bhushan said.

According to experts, as the virus becomes endemic, it generates a large number of variants, he said, adding, "Since the emergence of Omicron in 2021, close to 1,000 lineages have been assigned, which include approximately 100 recombinant variants."

"Most of the assigned variants have very little or no significant impact

on the functional attribute of the virus like increased transmissibility, disease severity or immune escape, etc. Only a few of the variants/sub-variants are designated as Variant of Concern, Variant of Interest [VOI], or SUM [subvariant under monitoring] based on scientific evidence on their transmissibility, disease severity or immune escape properties. XBB.1.5 or XBB.1.16 are VOIs, which are under intense scientific scrutiny but not cause of immediate concern," he said.

Omicron and its sub-lineages remain the predominant variants in India's cases.



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RAHUL GETS TWO-YEAR JAIL TERM IN DEFAMATION CASE



Rahul Gandhi arrives at the New Delhi airport after appearing before a court in Surat, Gujarat. REUTERS

Congress to appeal against the Surat court order, as Mr. Gandhi's Lok Sabha membership hangs in the balance; Parliamentary Affairs Minister says legal experts will study the verdict

A Surat court on Thursday convicted former Congress chief Rahul Gandhi in a criminal defamation case and awarded him a two-year jail term over his "why all thieves have Modi surname" comment.

Mr. Gandhi was present at the court when the judge passed the verdict. The court suspended the sentence for 30 days, so that Mr. Gandhi can appeal in a higher court. The court has given bail to him on ₹10,000 bond. The Congress has said that it will appeal against the verdict.

Mr. Gandhi had allegedly made the remarks during campaigning for the 2019 parliamentary polls. The criminal defamation case was filed against him by BJP MLA Purnesh Modi, who was earlier president of the BJP unit of Surat city. In his complaint, Mr. Purnesh Modi alleged that Mr. Gandhi while addressing a poll rally in 2019 in Karnataka defamed the entire Modi community with his

remark, "How come all the thieves have Modi as the common surname?" Chief Judicial Magistrate H.H. Varma had last week concluded hearing final arguments from both sides. Mr. Gandhi had last appeared before the Surat court regarding the case, filed under Indian Penal Code (IPC) Sections 499 and 500 (dealing with defamation), in October 2021 to record his statement. Thursday's developments have put a question mark over Mr. Gandhi's Lok Sabha membership from Wayanad.

In the landmark 2013 Lily Thomas v Union of India judgment, the Supreme Court had clearly spelt out that a lawmaker stands immediately disqualified on attracting a sentence of two years or more unless the conviction is stayed by a higher court.

The top court had struck down Section 8 (4) of the Representation of the People's Act as "unconstitutional" that provided a three-month window to file an appeal and continue as a lawmaker until the case is disposed off.

On Thursday, the former Congress chief quoted Mahatma Gandhi and tweeted, "My religion is based on truth and non-violence. Truth is my God and non-violence is the means to get it — Mahatma Gandhi".

On his arrival from Surat, Congress Parliamentary Party (CPP) chief leader and his mother Sonia Gandhi visited his 12 Tughlak Lane residence. Maintaining that the order of Chief Judicial Magistrate's Court was "full of errors and legally unsustainable", Rajya Sabha member and senior Supreme Court advocate Abhishek Singhvi asserted that the Congress would appeal against the order and was hopeful of getting a stay on the conviction from a higher court.

Parliamentary Affairs Minister Pralhad Joshi accused the Congress of "insulting" every institution and recalled how Mr. Gandhi had torn an ordinance that the Manmohan Singh government had brought to deal with situations like the present one that result in immediate disqualification.

Lok Sabha Speaker Om Birla's office didn't issue any formal statement on the issue but a "courtesy call" on Mr. Birla by Prime Minister Narendra Modi, Defence Minister Rajnath Singh and Mr. Joshi created a buzz in political circles. Sources claimed the Speaker's office will take note of the development only when the Surat court's order is officially communicated; the order will be legally vetted before a final decision on the disqualification issue is taken.

The Parliamentary Affairs Minister said the government will decide its next course of action only after legal experts study the Surat verdict.

GST APPELLATE TRIBUNAL MAY BE HEADED BY A FORMER SC JUDGE

New tax tribunal expected to address pile-up of unresolved legal cases, thus lowering the burden on courts and taxpayers; single-member bench will hear disputes involving less than ₹50 lakh

The Goods and Services Tax (GST) Appellate Tribunal is likely to be headed by a former Supreme Court judge or a former Chief Justice of a High Court and its framework may permit the resolution of disputes involving dues or fines of less than ₹50 lakh by a single-member bench.

Amendments to the GST laws to enable the tribunal's constitution, are expected to be introduced in the Lok Sabha.

While there will be one principal bench of the Appellate Tribunal in New Delhi and several State benches, appeals pertaining to disputes of less than ₹50 lakh that don't deal with a question of law could be decided by a single-member bench, as per the norms approved by the GST Council.

In February, the Council had reached a broad consensus on the long-awaited appellate body's functioning. Tax experts said the delay in setting up the Appellate Tribunal has led to a pile-up of unresolved legal matters over the tax.

"Currently, taxpayers are filing writ petitions to directly move the High Court," said Tanushree Roy, director at Nangia Andersen. "Establishment of Appellate tribunal would result in lower burden on the courts and taxpayers."

Expediting dispute resolution

A new appellate tribunal headed by ex-judges is aimed at expediting resolution of GST disputes

- Low value cases (up to ₹50 lakh) may be handled by single-member benches
- Currently, taxpayers file writ petitions burdening the High Courts

■ Amendments to GST laws to enable tribunal's constitution expected to be introduced in LS

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BoE FOLLOWS FED AS CENTRAL BANKS KEEP INCREASING RATES AMID BANKING TURMOIL



The Bank of England on Thursday followed the Federal Reserve and the Swiss National Bank in raising interest rates, as policymakers ploughed on with their fight against inflation in the face of the instability that rocked the global banking system this month.

Investors had questioned whether the central banks could press on with tightening policy after the collapse of two U.S. lenders earlier this month triggered turmoil in banks around the globe, ensnaring Europe's 167-year-old Credit Suisse AG.

While recent market jitters have eased, they have prompted investors to adjust to more challenging economic and lending conditions ahead.

The index of top European banks was down 1.7%, with German banking giants Deutsche Bank and Commerzbank falling 2.1% and 3.2%, respectively.

The European central banks raised rates a day after the Fed logged another quarter point increase, with Fed Chair Jerome Powell saying the banking industry stress could trigger a credit crunch with "significant" implications for a slowing U.S. economy.

On Wednesday, the Federal Reserve indicated it was on the verge of pausing further increases.

Mr. Powell sought to reassure investors about the soundness of the banking system, saying that the management of Silicon Valley Bank "failed badly". "These are not weaknesses that are running broadly through the banking system," he said, adding that the takeover of Credit Suisse seemed to have been a positive outcome.

But in a key shift driven by the sudden bank failures this month, the Fed's latest policy statement no longer says "ongoing increases" in rates will likely be appropriate.

THE OLD AND THE NEW

A combination of the features of the two pension schemes seems prudent

The Union Finance Ministry's reiteration in the Rajya Sabha recently, of the legal position, i.e., the absence of any provision to allow the accumulated corpus of members of the National Pension System (NPS) to be "refunded and deposited back" to States, should have a deterrent effect on those States contemplating a return to the Old Pension Scheme (OPS). The Ministry's stand reflects what the Pension Fund Regulatory and Development Authority (PFRDA) Act, 2013, the PFRDA (Exits and Withdrawals under the National Pension System) Regulations, 2015, and other regulations say. The Centre has also been making it clear, for the right reasons, that it is not considering any proposal to restore the OPS. As experts and the Reserve Bank of India (RBI) point out, the annual saving in fiscal resources that a reversion to the OPS entails is short-lived. The potential fiscal benefit would be overtaken by the huge liability later in the form of pension payment. The former RBI Governor, D. Subbarao, even called the idea "regressive", with more privilege for government servants than the public, many of whom have no social safety net.

However, the issue refuses to die down, as government employees or those in government-controlled enterprises have been fighting for it. Be it Maha-

ashtra, Uttar Pradesh or Karnataka, staff have struck work, demanding, among others, the re-introduction of the OPS. But their concern about the uncertainty over the amount of pension under the NPS is genuine as they are justified in aspiring for a quality retired life. The NPS, despite being PFRDA regulated, is a market-linked and defined contribution product, while the OPS is a defined benefit pension scheme, where beneficiaries generally get 50% of their final salary, and the whole cost is borne by the government. So, the flat rejection of the demand for the OPS would only exacerbate the situation. It is time that the Centre formulated a scheme that combines features of the old and the new. While retaining the element of employees' contribution, the scheme can have higher contributions by the government, which should also step in if the returns do not ensure the prescribed minimum pension amount. A proposal by Andhra Pradesh last year deserves attention. Holding on to the contributory character of the NPS, the proposal guarantees 33% of basic pay. If required, it can be improved upon to suit the requirements of other States too. Better health facilities that include a liberal insurance scheme can be considered. On their part, the employees should be both pragmatic and willing to resolve the issue.



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RIGHTING A WRONG

Aboriginal people must get permanent representation in government

Australia is on track to reckon with a dark chapter in its history after its Prime Minister, Anthony Albanese, made a promise to bring to its voters a referendum to constitutionally recognise Aboriginal and Torres Strait Islander people, thereby giving them permanent representation in the government, even if only in an advisory capacity. The specific subject of the proposed referendum, to be held later this year, is the Voice, a representative Indigenous body in the Australian Parliament, which would provide non-binding advice to Parliament on policy subjects that impact First Nations communities. As a representative mechanism, the hope is that the interests of the Indigenous people would be better addressed: as a social category they tend to be overrepresented in official figures on shorter life expectancy, higher rates of infant mortality, poorer physical and mental health, lower levels of education and employment, and higher rates of child removals, suicides, and community and family violence. However, despite the Voice proposal enjoying close to 59% public support (a recent poll), there are pockets of political resistance, including, ironically, from prominent Indigenous leaders such as Country Liberal Party Senator Jacinta Price. Ms. Price has expressed concern over wording which says that Aboriginal and Torres Strait Islander Voice “may make representations to the Parliament

and the Executive Government of the Commonwealth”, which she says elevates the Voice to a level surpassing a Cabinet Minister and potentially risks challenges to legislative decisions in the courts. Other Indigenous leaders favour a different prioritisation of approaches, for example, first agreeing on a treaty between Indigenous and non-Indigenous people, which would recognise that the former’s lands were never ceded to the “invaders”.

At the heart of the referendum proposal is the idea of reconciliation, however politically fraught it may be. Since European colonisation in 1778 of “Terra nullius”, or “nobody’s land”, it took around 200 years for the government to express regret for the “Stolen Generations”, which ripped the fabric of Indigenous society. It was also only in the late 2000s that the Australian government formally signed the “Close the Gap Statement of Intent”, that committed to achieving better health and life expectancy outcomes for Indigenous peoples. The longer these national wounds are left to fester, the harder it would be to bridge and heal them. In this context, no matter what the political objections to and modalities of the Voice referendum are, the Albanese government would do well to pursue the process to its logical conclusion and give every Australian the opportunity to speak up for how they believe social harmony can be achieved for their nation.

A CLIMATE CHANGE SURVIVAL GUIDE TO ACT ON



This week, the Intergovernmental Panel on Climate Change (IPCC) released the synthesis report of its Sixth Assessment Report (AR6) cycle, drawing together key findings from its six most recent reports. The report gains added legitimacy as its summary for policymakers is approved line-by-line by governments of the world. The United Nations Secretary General has called it a ‘survival guide for humanity’. The report can shape our collective response in this critical decade, which may be make-or-break for humanity, and is likely to be the last IPCC report for a few years.

Some takeaways

The report confirms that human activity is ‘unequivocally’ driving global temperature rise, which has reached approximately 1.1° C above pre-industrial levels. While the rate of emissions growth has slowed in the past decade, humanity is estimated to be on a 2.8° C (2.1°-3.4° C range) trajectory by 2100. This temperature rise has already led to rapid and widespread impacts on climatic systems. It flags that “For any given future warming level, many climate-related risks are higher than assessed in AR5”. This new realisation underpins the considerable attention in the IPCC report to trajectories that constrain global warming to 1.5° C rather than 2° C. This relative focus on 1.5° C has two implications.

First, the amount of carbon that the world can cumulatively emit before reaching key temperature limits, i.e., the world’s ‘carbon budget’, is far lower for the 1.5° C than the 2° C target. Modelled global pathways suggest that limiting warming to 1.5° C (with a probability of >50% requires greenhouse gas (GHG) emissions to be reduced by 43% by 2030 (median estimate), while the same number for limiting warming to 2° C (probability of >67%) is 21%. Strikingly, it

notes that the projected CO2 emissions over the lifetime of existing fossil fuel infrastructure without additional abatement already exceed the remaining carbon budget for 1.5° C.

Striving for a 1.5° C target implies deep and immediate reductions in emissions in all sectors and regions, which makes more salient different national circumstances and questions of climate equity and operationalisation of the United Nations Framework Convention on Climate Change’s core principle of Common but Differentiated Responsibility and Respective Capabilities. The IPCC report points out that humanity had already consumed 4/5ths of its total carbon budget for 1.5° C by 2019, with developed economies consuming the lion’s share. The report also notes that existing modelling studies, which are often used to assess emission trajectories, do not explicitly account for questions of equity. While from an impacts point of view, it is important to aspire to a 1.5°C target, the correspondingly lower carbon budget heightens questions of equity and who bears the responsibility for achieving these ambitious targets.

Second, the recognition of greater risks at lower temperatures points to the necessity of early climate adaptation. The report highlights that adaptation itself has limits, which implies that some losses and damages of climate change are inevitable. For example, the report finds that some coastal and polar ecosystems have already reached hard limits in their ability to adapt to a changing climate. The effectiveness of some of the adaptation options that are feasible and effective today (such as urban greening and restoration of wetlands) decreases with increasing warming. Importantly, the report cautions against certain forms of adaptation such as poorly planned seawalls — dubbed maladaptation — which can defer and intensify the impacts of climate for short term and often iniquitous adaptation gains. It also argues that at higher levels of warming, climate change could lead to cascading risks such as food insecurity, leading to migration, which are intensely challenging to manage. A logical corollary of these findings would be that because countries cannot entirely develop their way out of climate risk and vulnerability, mitigation remains essential.

The key message

So while the diagnosis is dire, what of the prognosis? The leading message of the report is that of urgently adopting ‘climate-resilient development’ — a developmental model that integrates both adaptation and mitigation to advance sustainable development for all. If this sounds like aiming high, that is because it is; countries no longer have the luxury of focusing on adaptation or mitigation or even development alone.

The report assesses the plethora of technologies and design options, such as solar energy or electric vehicles, that can help countries reduce emissions or become more resilient today at low costs, and in a technically feasible manner. It also points to the fact that there are more synergies than trade-offs between mitigation and adaptation actions and Sustainable Development Goals, although it warns against paying inadequate attention to these trade-offs. Prioritising and addressing equity and social justice in transition processes are shown to be key to climate-resilient development. The report strikes a particularly upbeat note on the co-benefits of climate action for air quality. A cost-benefit analysis suggests that the air quality and health benefits of

mitigation outweigh its costs.

While a climate-resilient development pathway is the journey, the destination is net zero emissions at the global level. If sustained, net-zero GHG emissions will result in a gradual decline in global temperatures. However, this may be contingent upon significant carbon dioxide removals, which are challenging to achieve at scale.

Progress report

How is the world doing in this regard? The report finds some tangible evidence of progress in the proliferation of laws and policies, and confirms the effectiveness of existing policy tools such as regulations and carbon markets. A promising, yet potentially unsung story is that of policy packages, which are a coherent and comprehensive set of policies tied to a particular policy objective that can help countries meet short-term economic goals.

At the same time, several gaps remain in humanity's response so far. The report points out that there are gaps between modelled sustainable

pathways and what countries have pledged (ambition gaps) as well as substantial gaps between what countries pledge and what they actually do (implementation gaps). Delayed action risks locking-in to high carbon infrastructure in this decade, and creating stranded assets and financial instability in the medium term. Therefore, high upfront investments in clean infrastructure are imperative. However, despite sufficient global capital, both adaptation and mitigation financing need to increase many-fold: between three to six times for annual modelled mitigation investments, from 2020 to 2030. The report, thus, paints a picture of progress and innovation in the face of inadequate ambition, implementation, climate finance and investment despite the cost-effectiveness of several response options.

The IPCC AR6 synthesis report is a landmark report because it offers a blueprint for sustainable development, while presenting a sobering account of present and future damages to ecosystems and the most vulnerable amongst us. It is now up to governments and people of the world to act.

NO SLANDER PLEASE, THEY ARE OUR FREEDOM FIGHTERS FIRST

March 23 is a milestone in the history of India's Independence struggle. It was on this day, in 1919, that Mahatma Gandhi was in Chennai on the invitation of Kasturi Ranga Iyengar. Gandhiji had hitherto been struggling to find a way to counter the draconian and recently enacted Rowlatt Act by the British. It was in the early hours that day that he dreamt of the idea of a mass hartal to counter the Act. The Satyagraha of April 6, 1919 was an act of defiance that brought the nation to a standstill and shook the foundations of the Raj.

Many may still be unaware of this pivotal moment and its importance in our history despite Gandhiji describing it in his autobiography, in the chapter, 'That wonderful spectacle'.

Thread of selfless zeal

Many such moments of indomitable courage, insurrection and sacrifice which have left their imprint on the freedom struggle have never got their due. The 1857 rebellion is called the First War of Independence. But the many spirited revolts against the British Empire in South India prior to this, such as the Attingal revolt, the Poligar rebellion and the Vellore Mutiny are scarcely mentioned. The central government's 'Azadi Ka Amrit Mahotsav' initiative, to celebrate and commemorate 75 years of freedom, has endeavoured to honour such unsung mileposts and icons.

With its thread of selfless nationalistic zeal, India's independence movement was a crucible that coalesced people from contradictory and even conflicting backgrounds and ideologies.

In the early 20th century, it pitted the moderates, who trusted constitutional methods, against the extremists, who preferred boycott and revolution. Thus the Lal-Pal-Bal triumvirate and Aurobindo underwent rigorous imprisonment, while the valorous Bhagat Singh, Birsa Munda and Vanchinathan sacrificed their lives.

There were also the icons, Gopal Krishna Gokhale and B.R Ambedkar, who served in the British Viceroy's executive council and were probably never imprisoned. But this in no measure dilutes or even diminishes their patriotism and contributions to India's freedom.

The intrepid Subhas Chandra Bose valiantly raised an army overseas to free India, a venture where he worked with Japan, an Axis power. The patriots Bhikaiji Cama, Shyamji Krishna Varma, Chempakaraman Pillai and Thillaiyadi Valliammai championed the cause of India's liberty from abroad, but can their methods, motives or love for India be questioned?

The situation today

It is a matter of regret that in the recent political discourse in India, leaders and organisations are being slotted, stigmatised and even slandered for their role or the lack of it in the freedom movement.

V.D. Savarkar is one such figure. Yet, in a letter dated May 30, 1980, Prime Minister Indira Gandhi wrote to Pandit Bakhle, then Secretary of the Swatantra Veer Savarkar Rashtriya Smarak: "Veer Savarkar's daring defiance of the British Government has its own importance in the annals of our freedom movement. I wish success to the plans to celebrate the birth centenary of this remarkable son of India." There needs to be an understanding of the era before indulging in coarse criticism.

Jawaharlal Nehru's tryst with Nabha jail, in September 1923 — he was arrested along with K. Santhanam and Acharya Gidwani — is a lesser known episode. Nehru was released on signing a bond that he would never



enter the princely State of Punjab. When Gidwani was arrested again later, Nehru wrote in his An Autobiography: "I took shelter behind the advice of friends, and made of it a pretext to cover my own weakness. For, after all, it was my weakness and disinclination to go to Nabha Jail again that kept me away, and I have always felt a little ashamed of thus deserting a colleague. As often with us all, discretion was preferred to valour".

Gandhiji himself supported the British in the bitter Boer war, or the South African war. He was later awarded the Kaiser-i-Hind medal, in 1915, by the British for his humanitarian work in South Africa, which he later returned in 1920. The moderates in the Congress supported the 1919 Montagu-Chelmsford Reforms in the immediate aftermath of the Jallianwala Bagh massacre. In 1942, C. Rajagopalachari stayed away from the Quit India Movement as he felt it would not serve India's best interests.

View history holistically

Could all these examples above be deemed to be perfidious? History should be looked at holistically instead of becoming an exercise where there is selective denunciation and nit-picking.

The Congress party did play a pre-eminent role in India's freedom movement, but this struggle that spanned over two centuries is not the fiefdom or sole preserve of any one person or establishment.

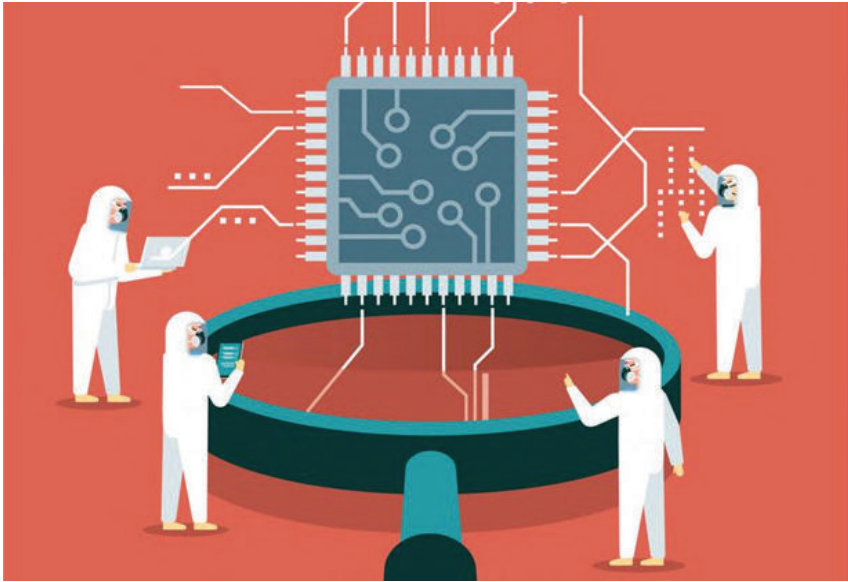
"Janani Janmabhumi-shcha Swargadapi Gariyasi" is a hemistich of a Sanskrit shloka from the Ramayana which broadly means 'Mother and motherland are superior even to heaven'.

Our gallant freedom fighters did not plunge into their battle against the British for pelf, position or power, and they certainly did not know whether they would live to see the next day. They were fallible humans who assessed circumstances and arrived at decisions with the sole aim of liberating their motherland. It is easy to sit on the high chair of hindsight and make sweeping judgements about history. To impugn individual patriotism while viewing it through the

coloured spectacles of concocted binaries is not only regressive but also wrong. In the 76th year of India's Independence, every Indian is beholden to express unreserved gratitude to all, especially the unsung luminaries of our freedom

struggle who were devoted to the national cause. This should transcend any ideological inclination or political proclivity that they professed or practised in their later lives.

INDIA'S PUSH FOR SEMICONDUCTORS



Why is the Indian government encouraging manufacturing semiconductors in the country? What advantages do India hold? Will the government's semiconductor ambition be limited?

EXPLAINER

The story so far:

The Union Government has disbursed around ₹1,645 crore in performance-linked incentives (PLI) for electronics manufacturers so far, as part of its efforts to bring in more of the electronics supply chain to India. The push for semiconductors, or integrated circuits, is far more pressing now, as these chips are found in practically every modern electrical appliance and personal electronics devices. More and more nations are trying to turn away from China's dominance in the space, following geopolitical pressures to de-leverage themselves from supply chain vulnerabilities.

Why is the government encouraging semiconductor manufacturing?

Semiconductor fabrication units, or fabs, turn raw elements such as silicon into integrated circuits that are fit to be a part of practically all electronic hardware in the world. Fabs are highly capital-intensive undertakings, costing billions of dollars for large facilities.

Semiconductor fabs of today may still be building circuits, but they require highly reliable and high-quality supply of water, electricity, and insulation from the elements, reflecting the high degree of precision, cost and capital needed to make the sophisticated circuits.

Countries have spotted strategic value in cornering segments of the value chain for fabs, even as the sophistication and capital needed to run them have climbed to historic highs. China pulled ahead of Taiwan last year, in terms of share of global sales from fabs, according to a report by the Semiconductor Industry Association (SIA).

It's not just India that is wary of this dominance. The U.S. passed the CHIPS Act last August, providing upwards of \$280 billion in subsidies and investments to manufacturers opening fabs and making semiconductors in the U.S. This has been combined with restrictions on the Chinese semiconductor industry. Are fabs opening in India?

The government's Invest India agency estimates that electronics manufacturing as a whole will be worth \$300 billion by the financial year 2025–26.

While facilities for assembling finished products have been steadily growing in number, fabs for making chipsets and displays, which are crucial parts of the manufacturing process for many electronics, are rarer. Minister of Electronics and Information Technology Ashwini Vaishnaw said that the first semiconductor manufacturing fab would be announced in the coming weeks. Can semiconductors and finished products both be made in India?

The SIA, which represents the bulk of semiconductor manufacturers in the U.S. and elsewhere, said in a report with APCO Worldwide in February that India should lean on its strength in the electronics manufacturing value chain.

So-called "foundry companies", which turn silicon into semiconductors, require investments upwards of 35% of revenues, the SIA warned, and entry costs run into billions of dollars. But companies that specialise in Outsourced Semiconductor Assembly and Test (OSAT) are less expensive to set up, and generate better margins, the SIA pointed out. The OSAT set-ups take care of the less capital-intensive parts of chipmaking, such as assembling the precise components that have already been manufactured, and running specialised tests to approve them.

A problem with many chip facilities in the traditional sense is that they tend to be captive units of large companies. While Foxconn's assembly facilities are being touted as creating several jobs and inviting investment into India, some of its most valuable facilities globally are dedicated to building Apple devices, which account for a fraction of handsets sold in India.

What other advantage does India have?

A large part of semiconductor manufacturing involves design and intellectual labour. India has an advantage here, as a large portion of semiconductor design engineers globally are either Indian or Indian-origin; chipmaking firms such as Intel and NVIDIA have large facilities in India that are flush with Indian talent working on design problems.

This is an advantage as China is losing control over in the face of sanctions and an ageing population.

"Without a sustainable pipeline of high calibre talent, China's goals for the semiconductor sector, especially in terms of further indigenising the industry, will be not achievable," Dr. Denis Simon, a Clinical Professor of Global Business and Technology at the UNC Kenan-Flagler Business School said in a testimony to the U.S.-China Economic and Security Review Commission.

Will India's semiconductor ambition be limited?

The opening of display and semiconductor fabs is one of the strategic and economic goals of India's electronics manufacturing incentive programmes, and breaking new ground on ambitious plans connected to popular brands such as Apple is something that the Union government and States are equally eager to accomplish.

The government appears to be developing the parts of the ecosystem that have promise for sustainable growth and fiscal feasibility.

Minister of State for Electronics and Information Technology Rajeev Chandrasekhar said at the Raisina Dialogue earlier this month that the electronics value chain would have to be an international undertaking among nations with common values to be effective.

That is, if like-minded nations each specialise in different aspects of the semiconductor and electronics manufacturing process, and work together on distribution, that still solves the geopolitical problem of Chinese dominance without simply monopolising power with a different country. No country should "delude" themselves into thinking that they will be the "king of the hill," Mr. Chandrasekhar said.

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WHY IS INDIA'S CAMPA AT ODDS WITH NEW IPCC REPORT?

Why is afforestation contested in India? What does CAMPA play? Why are natural ecosystems important?

The story so far:

A report released on March 20, that originates in the Synthesis Report of the Intergovernmental Panel on Climate Change (IPCC), a U.N. expert body, states that not degrading existing ecosystems in the first place will do more to lower the impact of the climate crisis than restoring ecosystems that have been destroyed — a finding that speaks to an increasingly contested policy in India that has allowed forests in one part of the country to be cut down and 'replaced' with those elsewhere.

Why is afforestation contested?

India has committed to adding "an additional (cumulative) carbon sink of 2.5-3 GtCO₂e through additional forest and tree cover by 2030", as part of its climate commitments to the U.N.

Afforestation is also codified in the Compensatory Afforestation Fund Management and Planning Authority (CAMPA), a body chaired by the Environment Minister.

When forest land is diverted to non-forest use, such as building a dam or a mine, that land can no longer provide its historical ecosystem services nor host biodiversity.

According to the Forest (Conservation) Act, 1980, the project proponent that wishes to divert the land must identify land elsewhere to afforest, and pay for the land value and the afforestation exercise. That land will, thereafter, be stewarded by the forest department.

Why does CAMPA matter?

The money paid sits in a fund overseen by the CAMPA. As of 2019, the fund had ₹47,000 crore.

The CAMPA has come under fire for facilitating the destruction of natural ecosystems in exchange for forests to be set up in faraway places.

Why do natural ecosystems matter?

Research has found that nature ecosystems sequester more carbon. "Creating single-species plantations in, say, Haryana does not really come close to a natural sal forest lost to a development project in, say, Central Indian forests in terms of biodiversity, local livelihoods, hydrological services, and sequestered carbon," Sharachandra Lele, distinguished fellow in Environmental Policy and Governance, Ashoka Trust for Research in Ecology and the Environment, Bengaluru, told The Hindu by email.

"Of these, sequestered carbon recovers fastest under fast-growing plantations, but even then, it will take many decades before it approaches the level of carbon sequestered in a natural forest," Dr. Lele said.

"Within the climate action ecosystem, [the report's finding] also means that climate action, such as technologies to combat climate change, renewable energy farms, etc., should not come at the cost of natural ecosystems," said Neha Sinha, a conservation biologist.

How do ecosystems compare to renewable energy?

The IPCC report also found that the sole option (among those evaluated) with more mitigating potential than "reducing conversion of natural ecosystems" was solar power and that the third-highest was wind.

But many solar parks in India have triggered conflicts with people living nearby because they limit land-use and increase local water consumption.

A 2018 study published in Nature Ecology & Evolution also found that wind farms in the Western Ghats had reduced the "abundance and activity of predatory birds, which consequently increased the density of lizards".

However, the IPCC report also noted that "reducing conversion of natural ecosystems" could be more expensive than wind power, yet still less expensive than "ecosystem restoration, afforestation, [and] restoration", for every GtCO₂e.

AMID RUCKUS, LS PASSES UNION BUDGET WITHOUT DISCUSSION



Tug of war: Lok Sabha members protesting in the House during the second phase of Budget Session on Thursday. ANI

The Budget envisages an expenditure of ₹45 lakh crore for the fiscal year starting April 1; the House is likely to take up the Finance Bill, 2023 today

The Lok Sabha on Thursday passed the Union Budget without any discussion as the Opposition continued protest over its demand for a Joint Parliamentary Committee (JPC) probe into the Adani issue.

The Lower House functioned barely for six minutes in the first half before Speaker

Om Birla adjourned it until the post-lunch session. Similar scenes were witnessed at 2 p.m when the House resumed as the Opposition members trooped into the Well demanding a JPC and the Treasury benches matching the demands with slogans asking Congress leader Rahul Gandhi to apologise for his remarks in the U.K. Following this, the House was adjourned again.

When the House reconvened at 6 p.m., the Opposition's amendments to the government's spending plan were rejected by voice vote. Union Finance Minister Nirmala Sitharman then moved the Demands for Grants for 2023-24 and the relevant Appropriation Bills for discussion and voting. The Speaker then applied guillotine and put the Demands for Grants of all Ministries for voting which were passed, amid sloganeering by the Opposition.

Though the Business Advisory Committee had granted approval, no discussion could take place on the Ministries of railway, rural development, health and family welfare, panchayati raj, tribal affairs and, tourism and culture.

The Speaker applying guillotine to get the Demand for Grants passed is significant with speculation rife that the Budget Session might end early. Both Houses have failed to function in the second leg of the session due to protests by the Opposition and Treasury benches.

The House is likely to take up the Finance Bill, 2023 on Friday. With the passage of the Bill, tax proposals announced in the Budget would be passed. The Budget envisages an expenditure of around ₹45 lakh crore for the financial year starting April 1. The total expenditure is estimated at ₹45,03,097 crore, of which total capital expenditure has been pegged at ₹10,00,961 crore.

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