# Topics - MINDS MAPS included (Daily current affairs 28th March 2025

SAURABH PANDEY
CSE
PROME BASES TO UPSE BELLEANS

- Kuno National Park
- SAHYOG Portal:
- Understanding India's Defence Dependency
- NEP 2020's Trilingual Policy
- What is Green Iron?
- Silvaguard'
- Lewis Glacier on Mount Kenya
- MAINS



**By saurabh Pandey** 



**Target Mains -2025/26 -**

Q. "Implementing trilingual policy will have both cultural and cognitive challenges" Discuss

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## Furball's progress





A two-month-old cub, one of the twins born to mother cheetah Veera, at the Kuno National Park in Madhya Pradesh. PTI

#### **Kuno National Park**



- Kuno National Park is located in Madhya Pradesh, India.
- The park was established in 1981 and covers an area of approximately 748 square kilometers.
- It is known for its efforts in the conservation of the Asiatic lion, with plans to reintroduce them to the park.
- **The park features diverse ecosystems, including dry deciduous forests, grasslands, and rocky hills.**
- Kuno National Park is home to various wildlife species, including leopards, deer, and numerous bird species.
- The park offers opportunities for eco-tourism and wildlife safaris for visitors.
- Conservation efforts in Kuno National Park aim to enhance biodiversity and protect endangered species

#### Back door censor

SAHYOG must adhere to the safeguards and procedures in Section 69A of IT Act

y informing the Delhi High Court that it cannot be compelled to come on board the Union government's SAHYOG portal, the social media platform, X, has brought to light a mechanism that could potentially be misused by the government in its attempts to curb content on the Internet. The portal, which has been conceptualised by the government to be a platform that will facilitate coordination among law enforcement agencies, social media platforms and telecom service providers to help in quicker takedowns of unlawful content, seems to be a follow-up to an office memorandum by the Ministry of Electronics and Information Technology, in October 2023, authorising government agencies to block content, under Section 79 of the IT Act. The creation of SAHYOG was disclosed by the Union Ministry of Home Affairs (MHA) in the Delhi High Court last year, in Shabana vs Govt Of NCT Of Delhi And Ors., where the court had emphasised the need for a mechanism to enable real-time interactions between Internet intermediaries and law enforcement authorities in order to address urgent cases. Section 79 of the IT Act provides safe harbour protection to intermediaries so that they are not liable for third-party content hosted or transmitted on or through their platforms provided they adhere to certain conditions. Section 79(3)(b) provides an exception to this protection - if an intermediary receives actual knowledge or is notified by the government agency that certain content is being used to commit an unlawful act, it must remove or disable access to that content quickly, failing which it will lose safe harbour protection.

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By using Section 79(3)(b) to enable the creation of what is a content takedown portal, the government - as X rightly claims in its petition - bypasses the limited safeguards under Section 69A of the IT Act, which allows content blocking only on specific grounds such as national security and public order, and mandates procedural safeguards such as a designated officer's approval, written justification and independent review of any such blocking request. X's claim also justifiably raises the possibility of SAHYOG being used as a tool for unchecked censorship as it will allow for multiple government agencies including Ministries. State governments and local police to have blocking powers unlike the provisions in Section 69A. If SAHYOG is used as the medium to address blocking orders, there seem to be no opportunities for challenging the order, nor are there any procedural protections that are otherwise available through Section 69A. This suggests that the implementation of the portal could be ultra vires and violates the Supreme Court's judgment in Shreya Singhal vs Union of India. While the Delhi and Karnataka High Courts (X has also filed a petition challenging SAHYOG here) hear the cases, the MHA must provide the full details of the features of the SAHYOG portal for public perusal to ensure that it does not bypass the legal frameworks for online content regulation.



#### **Introduction to the SAHYOG Portal:**



- In recent developments, the social media platform X has made headlines by informing the Delhi High Court that it cannot be compelled to join the Union government's SAHYOG portal.
- This revelation has sparked a significant debate about the potential misuse of this mechanism by the government to control and curb content on the Internet

#### What is SAHYOG?



The SAHYOG portal was conceptualized as a response to the growing need for a streamlined process to tackle unlawful content online. It was first disclosed by the Union Ministry of Home Affairs (MHA) during a court case last year, emphasizing the necessity for real-time interactions between internet intermediaries and law enforcement.

The portal aims to act as a conduit for faster communication and response to unlawful content.

Its implementation has been met with skepticism regarding its implications for user privacy and freedom of expression.

#### The Role of the Government in Content Regulation



The government's role in regulating online content has always been a contentious issue. With the rise of digital platforms, the need for a robust framework to manage unlawful content has become paramount. However, the methods employed can sometimes raise eyebrows.

- The balance between ensuring safety online and preserving free speech is often delicate.
- Critics argue that the government could overreach, using mechanisms like SAHYOG to impose censorship

#### The Legal Framework: Section 79 of the IT Act



To understand the implications of SAHYOG, we need to dive into the legal framework surrounding it, particularly Section 79 of the IT Act. This section provides safe harbour protection to intermediaries, meaning they aren't liable for third-party content as long as they follow certain conditions.

Safe harbour protection is crucial for platforms like X. However, it comes with strings attached that could potentially complicate their operations.

#### Safe Harbour Protection Explained



Safe harbour protection is crucial for platforms like X. It allows them to operate without the fear of being held accountable for every piece of content shared by users. However, this protection comes with strings attached.

Intermediaries must act swiftly upon receiving notices about unlawful content.

Inaction could lead to loss of their safe harbour status, hence the precarious balance they must maintain.

#### The Exception Under Section 79(3)(b)



Section 79(3)(b) states that if an intermediary is notified by a government agency about unlawful content, they must act quickly to remove it. Fail to do so, and they risk losing their safe harbour protection. This provision is at the heart of the SAHYOG portal's creation.

This requirement raises concerns about potential overreach and misuse of authority.

The balance between governmental oversight and platform autonomy is delicate and often fraught with tension

#### The Implications of SAHYOG



While it aims to streamline content regulation, it also opens the door to potential misuse.

The SAHYOG portal could be misused by the government to impose unchecked censorship.

With multiple agencies having the power to block content, the risk of arbitrary decisions increases.

#### **Potential for Misuse**



X's petition highlights a significant concern: the SAHYOG portal could be misused by the government to impose unchecked censorship. With various government agencies wielding the power to block content, the implications for free expression are troubling.

Increased oversight may lead to a chilling effect on free speech.

The potential for arbitrary decisions and content removal without proper justification raises alarms.

#### **Bypassing Section 69A Safeguards**



The government's use of Section 79(3)(b) to create SAHYOG effectively bypasses the safeguards outlined in Section 69A of the IT Act. This section allows content blocking only under specific grounds, such as national security, and requires procedural safeguards like a designated officer's approval.

The erosion of these safeguards raises questions about the legality and morality of the SAHYOG framework.

Critics argue that this undermines the principles of due process and accountability.

#### The Judicial Response



As the legal battle unfolds, the courts are taking a closer look at the implications of SAHYOG.

- The Supreme Court's judgment in the Shreya Singhal case emphasized the importance of protecting free speech online.
- Any mechanism that undermines this principle could face serious legal challenges

#### The Future of SAHYOG



- The SAHYOG portal presents a complex intersection of technology, law, and governance.
- While the intention behind it may be to enhance content regulation, the potential for misuse and the lack of procedural safeguards raise significant concerns.
- As legal proceedings continue, it's crucial for the government to ensure that any measures taken do not infringe upon the fundamental rights of individuals.

# U.S. defence ties — India needs to keep its eyes open

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PRINCE TO DOS FREIDAND
PRINCE TO DOS FREIDAND

t is no state secret that the defence public sector undertakings have the Indian armed forces as their captive customers. In fact, with the 'Aatmanirbhar Bharat' campaign, this dependence has only increased and has added to the stress of planners in the Indian Air Force (IAF) as they juggle with a depleting squadron strength in the IAF due to a poor production rate by Hindustan Aeronautics Limited. After the IAF chief made his angst clear at the Aero India-2025 show in Bengaluru in February, there has been a flurry of media statements about how a reinvigorated environment is now geared up to supply Tejas MK1A Light Combat Aircraft (LCA) jets. This month, the handing over event of the first rear fuselage for the Tejas, made by a private manufacturer - with the Defence Minister and the IAF chief present - has also been highlighted in the media.

Even as the report of the Ministry of Defence committee looking into the IAF's needs (including imports) is being evaluated, there are three facts that should help keep us grounded.

#### SIPRI report and U.S. policy

First, the latest Stockholm International Peace Research Institute (SIPRI) report for 2020-24 shows that India is still the second highest arms importer in the world. However, the fact that India's imports have reduced by 9.3% from 2015-19 is good news, but with a rider – expensive weapon systems such as aircraft, tanks, top end radars, and specialised armament, would continue to be imported for many more years and contribute to the import bill.

Second, the IAF has thrown its full weight behind indigenous fighter aircraft – LCA Tejas MkIA, Tejas MkZ and the Advanced Medium Combat Aircraft (AMCA), all of which are planned with American engines. The IAF's kinetic operational potential would, thus, become a function of America's calculations of India's worth in its strategic calculus. Would India be weaned away from its heavy dependence on



Air Vice Marshal Manmohan Bahadur (retired)

is former Additional Director General, Centre for Air Power Studies



New Delhi needs to avoid a dependency that affects its strategic autonomy Russia, which contributes to 36% of its arms imports? The IAF's inventory of 270 Sukhoi Su-30 fighters, S-400 missile systems and similar big-ticket items for the Indian Army and the Indian Navy stand out against a positive affirmation.

Third, the frequent coinage of fancy-sounding new policies in India-U.S. relations in the past two decades should keep India on its toes *vis-à-vis* their demonstrated short shelf life. Whatever became of the 'Defence Technology and Trade Initiative' of 2012 which was much tom-tommed, and also said to bring in niche cutting-edge technology and usher in a new paradigm in defence cooperation? Are we sure that the end result of the recently announced framework for the 'U.S.-India Major Defence Partnership in the 21st Century' would be any different considering the tempestuous churn in American foreign policy with a transactional new U.S. administration under President Donald Trump?

#### 'Partnership' is the key word

There is historical reality to back this negative appreciation. The joint statement, after U.S. Secretary of Defence Ashton Carter's visit to India in April 2016, said that [a] "defense relationship is a key component of the strategic partnership between India and the US." Similar sentiments have been expressed recently after the Trump-Modi talks.

The key word is 'partnership'. But the million-dollar question is whether two nations that are culturally, financially and with differing world outlooks, be true partners. An article by Anna Simons, Professor of Defence Analysis, in the Winter 2013-14 issue of the U.S. Army War College magazine, *Parameters*, says that "...a partnership can succeed only if it is grounded in mutual indispensability", since "..anything less creates a dependency, and a dependency by definition is not partnership." This raises the question whether India and the U.S. are indispensable to each other. And if they are not,

then can Washington and New Delhi be true partners?

The indispensability factor can be tested by seeking answers to three pointers. First, are both parties equals, interchangeable and can blend seamlessly? Second, is a division of tasks possible for joint programmes? Third, can the expertise possessed by each nation complement and fill the gaps that exist in the other's capabilities? A truthful analysis of their respective defence research and development and manufacturing sectors shows that there is great asymmetry in the capabilities, and the follow up can only result in India's stifling dependency on the U.S.

But the same questions can be asked about the other relationships of India too, say with Russia, Israel or France. The answer lies in whether India has a political indispensability quotient in such strategic relationships or whether it is like the U.S.-Pakistan 'partnership' that broke when Islamabad outlived Washington's geo-political interests and was dumped like a fly in a tea cup. Or, even the recent unravelling of the U.S.'s decades long and iron-clad trans-Atlantic partnership with Europe, leading to questions being asked about the reliability of the Trumpian friendship.

#### Looking ahead

This brings us back to the theme of this article. Are we heading the correct way as we look to the U.S. for our strategic armament needs? The answer, surprisingly, actually lies with Washington on whether the U.S. wants a 'true partnership', in which case it has to make India politically indispensable to itself (the U.S.) by imbuing a special friendly slant in our relations. On India's part, New Delhi must ensure that its decisions 'insure' its interests against any U.S. policy reversal in the geopolitical environment that it is placed in. Even as India imports vitally needed aircraft and other equipment, its eyes need to be wide open to avoid a dependency that would negatively affect its strategic autonomy.

# Understanding India's Defence Dependency: A Critical Analysis Introduction



- Heavy reliance on Defence Public Sector Undertakings (DPSUs) for operational needs.
- Push for self-reliance in defence manufacturing intensifies pressure on military planners.
- Urgency for aircraft like the Tejas MK1A highlighted by IAF chief at Aero India-2025.

#### The Role of Defence Public Sector Undertakings

- DPSUs are critical suppliers for the Indian military.
- The Aatmanirbhar Bharat initiative aims to reduce foreign imports and boost domestic production.
- Pressure on DPSUs to deliver is immense.

#### **Aatmanirbhar Bharat Campaign**

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- A call for self-sufficiency in defence.
- Aims to empower local manufacturers and reduce import bills.
- Transition faces significant challenges.

#### The Stress on Indian Air Force Planners

- Depleting squadron strength adds pressure on planners.
- Timely production and delivery of aircraft is crucial.
- Hindustan Aeronautics Limited (HAL) production rates are not meeting expectations.

#### The Current State of the Indian Air Force

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- IAF's operational capabilities are under threat due to lack of aircraft.
- Immediate attention required from government and DPSUs.

#### **Depleting Squadron Strength**

- Alarming decline in squadron strength affects readiness.
- Result of production delays and insufficient procurement strategies.

#### **Production Challenges with Hindustan Aeronautics Limited**

- HAL criticized for slow production rates.
- Backlog in aircraft deliveries exacerbates IAF's challenges.

#### The Tejas MK1A Light Combat Aircraft



Tejas MK1A is a beacon of hope for IAF capabilities.

Recent developments include the handover of the first rear fuselage by a private manufacturer.

#### **SIPRI Report Insights**

India is the second-largest arms importer globally.

Slight reduction in imports, but reliance on expensive systems persists.

#### India as a Major Arms Importer

SIPRI report questions the sustainability of India's import model.

## The Shift in Import Trends

9.3% decrease in imports, but need for high-end technology remains

#### **Indigenous Fighter Aircraft Initiatives**



IAF supports indigenous projects like LCA Tejas Mk1A and AMCA. Initiatives still rely on foreign technology, especially American engines.

#### The Role of American Engines

Dependence on American engines raises concerns about strategic autonomy. IAF's capabilities may depend on U.S. foreign policy.

#### The U.S.-India Defence Relationship

Multifaceted and historically significant relationship. Essential to assess if the partnership is mutually beneficial.

#### **Historical Context of the Partnership**

U.S.-India defence partnership has evolved with various initiatives. Effectiveness of these initiatives remains in question.

## The Indispensability Factor



Partnership requires both parties to be indispensable to each other.

Raises questions about the nature of the U.S.-India relationship.

#### **Future Implications for India**

India must balance foreign technology with strategic autonomy.

Avoid becoming overly dependent on foreign suppliers.

#### Strategic Autonomy vs. Dependency

Challenge lies in ensuring strategic interests are not compromised.

#### **Conclusion**

Self-reliance in defence is commendable but requires careful navigation.

U.S.-India relationship must evolve into a true partnership.

Vigilance needed to avoid a dependency trap that could hinder national security.

#### The flawed push for a third language

While students can study multiple languages privately, it's not cost-effective to fund the teaching of more than two languages in public schools. When India's schools struggle with basic proficiency in two languages, enforcing a third without any clear benefits is deeply flawed



K. Ashok Vardhan Shetty

vidence-based policymaking relies on data, research, and statistical analysis - not ideology, untested assumptions or political convenience. It ensures that policies address real needs, maximise effectiveness, and avoid unnecessary burdens. By this standard, the National Education Policy (NEP) 2020's push for a third language in schools fails to meet the

What do surveys say?

Any discussion on teaching a third language must begin with an honest evaluation of India's school system and its canacity to teach subjects effectively. The Programme for International Student Assessment (PISA), a global test which evaluates reading, math, and science skills of 15-year-olds, conducted every three years by the Organisation for Economic Co-operation and Development, highlights India's struggle In 2009, India ranked 73 out of the 74 participating countries, ahead of only Kyrgyzstan, Since then, India has withdrawn from PISA. In contrast, countries like Singapore, China, South Korea, Estonia and Finland have consistently ranked near the top, reflecting the strength of their school education systems

Domestic surveys paint an equally dismal picture. The National Achievement Survey (NAS), conducted every three years since 2001, assesses learning outcomes in Classes 3 5 8 and 10 NAS 2017 found that only 48% of Class 8 students could read a simple paragraph in their regional language or Hindi; only 47% could write an essay or letter; and just 42% had a good grasp of grammar. NAS 2021 showed slight improvements of 56%, 49%, and 44%, respectively. NAS 2018 found that English proficiency, tested only at the Class 10 level, was equally poor Notably, NAS does not assess third-language proficiency, raising concerns about policymakers' reluctance

to scrutinise its effectiveness. The Annual State of Education Report (ASER), conducted by the NGO Pratham, assesses school enrolment and learning outcomes in rural India. ASER 2018 found that 27% of Class 8 students couldn't read even a Class 2-level text properly in their egional language or Hindi. This was 73.8%; in 2022, it was still a

Many of India's school students are and barely managing English, which two languages well rather than three third-language proficiency shields the policy from scrutiny. Even NEP 2020 fails to address this data gap.

Therefore, wouldn't it be wiser to allocate scarce resources toward strengthening core subjects like math and science, and emerging technologies such as Artificial Intelligence (AD? China is already piloting AI in 184 schools, including for six-year-olds. Estonia, Canada, South Korea, and the U.K. are integrating AI into secondary education

What does research say? NEP 2020's trilingual policy oversimplifies a complex issue, offering a



single-sentence endorsement without

The Cambridge Handbook of Third anguage Acquisition highlights that cognitive benefits occur when learners re challenged but not overwhelmed. Learning a third language (L3) increases cognitive load. If students are still struggling with their first (LI) and second (L2) languages, learning L3 may exceed their cognitive capacity, causing mental fatigue and diminished learning efficiency. It also reduces practice time for L1 and L2 risking their attrition with L2 being more vulnerable. Cross-linguistic interference can cause pronunciation. grammar, and vocabulary mix-ups. Achieving equal fluency in three languages is rare; one typically dominates while the others weaken. Research also shows that language similarity impacts earning ease. Speakers of Marathi, bi, and Odia (Indo-Aryan languages amily) experience facilitative transfer when learning Hindi as L3 due to shared rammar, vocabulary, and phonetics. In ontrast, Tamil (Dravidian), Santali Austro-Asiatic), and Mizo (Sino-Tibetan)

speakers face non-facilitative transfer. aking 1.3 acquisition much harder and creating an asymmetric learning burden NEP 2020's rigid trilingual mandate overlooks these complexities.

While students can study multiple languages privately, it's not cost-effective

to fund the teaching of more than two languages in public schools. Adding a third language requires significant investments in teacher recruitment. training, textbooks, and technology - a major challenge for rural schools and budget-constrained States.

be forced on States, and students are free to choose any three languages, provided that at least two are native to India However, this "choice" is illusory. Imagine a school in Tamil Nadu where 30% of students want to learn Telugu, 20% Malayalam, 20% Kannada, 10% Hindi, and 10% Sanskrit as their third language. Such varied preferences make it impractical to hire enough qualified teachers for each language. There is a hidden push here for Hindi or Sanskrit in non-Hindi-speaking States because cost and supply constraints will compel schools to offer

one or both as the third language. NEP 2020's three-language policy ignores these real-world challer

A policy stuck in the past

NEP 2020 vaguely mentions using technology for language learning but overlooks the game-changing potential of AI-powered translation tools. They can instantly translate text, images, and audio across languages, and also convert text in any language to audio in another language and vice versa, reducing the necessity for multilingual education in its current form.

While learning one's mother tongue or regional language and English are essential for foundational literacy and should be taught using traditional classroom methods enhanced by modern digital tools, the third language doesn't require the same proficiency or classroom instruction. Instead, why not leverage AI o let students learn additional languages independently, based on their needs and their own pace? This approach would cost-effective and flexible The NEP 2020's approach to language

learning clashes with the aspirations of parents and students. It treats languages as cultural pursuits, ignoring their practical value in the job market, Additionally, the policy reveals its ideological bias by dedicating more discussion to Sanskrit - a language with little practical use and limited career opportunities - than English. At a time when nations across Europe, Asia and Latin America, including Russia, China. South Korea, Japan and Brazil, are actively promoting English education, the NEP 2020 fails to acknowledge its crucial role in higher education, science and technology, and global job markets.

Lessons from Singapor In From Third World to First, Lee Kuan

Yew, himself of Chinese origin, recounts how he resisted intense pressure from Singapore's Chinese majority (74.3% of population) to declare Mandarin as the sole national language, Recognising that this would alienate Malays (13.5%). Tamils (9%) and other minorities, and to ensure fairness, Lee chose English - a colonial legacy but a neutral language – as Singapore's lingua frança.

Singapore adopted a bilingual education system, with students learning English as their first language and their mother tongue (Mandarin, Malay, or Tamil) as the second. Parents supported English-medium education for better career prospects, while the mother tongue reinforced cultural identity. This policy fostered social cohesion, prevented THE GIST

ethnic tensions, and ensured cultural

it into a global hub for multinational corporations, finance, and innovation,

Singapore's school education system is

among the best in the world - in PISA

Why Hindi won't work as a unifier

The 2011 Census states that 43.63% of

Indians speak Hindi. However, noted

scholar G.N. Devy, in India: A Linguistic

y including 53 other languages as

"dialects" of Hindi. Several of these

Rajasthani, are completely independent

Moreover, the 2011 Census highlights

languages like Awadhi, Bhojpuri,

languages, much older than Hindi

Excluding these, true Hindi speakers account for just 25% of the population.

that 63.46% of Indians have never lef

their birthplace, 85.27% remain within

ew Delhi, inter-State migrations are

When only 25% of Indians speak Hindi

and 95% of Indians remain within their

the push for Hindi as a national lingua

franca, whether direct or indirect, is

The idea that a single language is

import. In the 19th and 20th centurie

Romania and several other European

nationalism. But applying this model to

linguistically diverse civilisations – is

vibrant, biodiverse forest with a sterile

monoculture. Historian John Keav, in

Midnight's Descendants, credits India's

linguistic flexibility for its unity, unlike

the sole national language, alienating

Bengalis and leading to Bangladesh's

the Constitution's Eighth Schedule

strengthening federalism.

Evidence over ideology

The NEP 2020's mandatory

three-language policy is a textbook

third without any clear benefits or

and implementation is deeply flawed.

One reason non-Hindi speaking

outperform the Hindi heartland

embrace of English, Tamil Nadu's

since 1968, proves that linguistic

emphasising English for global

trilingual mandate.

empower students.

example of ideology trumping evidence. When India's schools struggle with basic

proficiency in two languages, enforcing a

consideration for cognitive strain, funding

southern States, particularly Tamil Nadu,

economically is because of their greate

successful two-language policy, in place

disregards both internal successes and

global best practices, pushing a rigid

pragmatism fuels progress. Yet, NEP 2020

India should learn from Singapore and

adopt a pragmatic two-language policy,

competitiveness and regional language

nationalism must give way to policies that

Writer is a retired IAS officer and former

VC of Indian Maritime University, Chennal

for cultural preservation. Linguistic

reorganised States linguistically, and

retained English as an official language

defusing tensions, preserving unity, and

Pakistan, which tried imposing Urdu as

creation. India recognised 22 languages in

deeply flawed. It is like replacing a

Germany, Italy, Poland, Hungary

countries embraced linguistic

India - one of the world's most

essential for national unity is a European

npletely misguided.

mostly away from the Hindi heartland

their native district, and 95.28% never

again in 2022

rankings, it was 1 in 2015, 2 in 2018, and 1

preservation. English also drove Singapore's economic rise, transforming

> The Cambridge Handbook of Third Language Acquisition highlights that cognitive benefits occur when learner are challenged but not overwhelmed. Learning a third language (L3) increases cognitive load.

Civilization, reveals this figure is inflated Brajbhasha, Magadhi, Chattisgarhi, and

However, noted scholar G.N. Devy, in India: A Linguistic languages as "dialects" of migrated out of their home State. With job Hindi. Several of these opportunities concentrated in non-Hind languages like Awadhi, speaking States in the south and west and Chattisgarhi, and Rajasthani, are completely independen languages, much older than





NEP 2020 vaguely mentions using technology for language learning but overlooks th game-changing potential of Al-powered translation tool

The 2011 Census states that 43 63% of Indians speak Hindi Civilization, reveals this figure is inflated by including 53 other jpuri, Brajbhasha, Magadhi home States and use only their languages,



#### What Does Research Say? NEP 2020's Trilingual Policy



#### **Introduction to NEP 2020**

- The National Education Policy (NEP) 2020 has sparked debate, particularly its trilingual policy.
- Aims to promote multilingualism but may oversimplify complex issues.
- Offers a one-size-fits-all approach, lacking consideration for global best practices and cognitive implications.

#### The Complexity of Language Learning



**Cognitive Load and Language Acquisition** 

Research highlights cognitive benefits when learners are challenged but not overwhelmed.

Learning a third language (L3) can increase cognitive load, risking mental fatigue.

The Challenge of Learning a Third Language

Struggling with L1 and L2 while adding L3 can reduce practice time, risking attrition.

Cross-Linguistic Interference: Equal fluency in three languages is rare; language similarity affects learning ease.

#### Implementation Challenges of NEP 2020



The Illusion of Choice in Language Selection

Despite claims, practical challenges lead to a hidden push for Hindi or Sanskrit.

Financial Implications for Public Schools
Implementing a third language requires significant investment, challenging for rural and budget-constrained schools.

#### A Policy Stuck in the Past



The Role of Technology in Language Learning
NEP 2020 overlooks Al-powered tools that can reduce the need for
traditional multilingual education.

The Need for AI in Language Education

AI offers a cost-effective, flexible approach, catering to individual learning needs.

#### The Ideological Bias of NEP 2020

The Emphasis on Sanskrit Over English

NEP 2020 shows bias by focusing on Sanskrit, overlooking English's global importance

#### Lessons from Singapore's Language Policy



#### **Bilingual Education Success**

Singapore's bilingual system emphasizes English and mother tongues, fostering social cohesion and economic growth

#### Why Hindi Won't Work as a Unifier

The Reality of Hindi Speakers in India
Only about 25% of Indians are true Hindi speakers, making it an ineffective national lingua franca.

#### **Evidence Over Ideology**

The Case for a Pragmatic Two-Language Policy

A two-language policy emphasizing English for global competitiveness and regional languages for cultural identity is recommended.



#### Conclusion

- NEP 2020's trilingual policy, while well-intentioned, fails to address language learning complexities and practical realities.
- A flexible, evidence-based approach is needed to empower students and enhance linguistic capabilities.



# Green iron is a prize worth billions, winning is the trick

**Clyde Russell** 

PERTH

Decarbonising the steel industry is one of the massive challenges in meeting climate goals, but could end up being extremely profitable for companies

The steel value chain accounts for 7% to 9% of global carbon emissions, the largest single industrial contributor and thus a prime target for the net-zero by 2050 goals of many countries and companies.

and governments pre-

pared to take the risks.

The problem is that about 80% of steel emissions come from a single step in the process, namely turning iron ore into pig, or crude, iron by removing oxygen and other impurities, a process that now in-

volves using a lot of coal.

The good news is there are available technologies to take coal largely out of the mix, and while the eventual finished steel will not be emissions-free, it is possible to get the carbon intensity down to around 300 kg (661 lb) per ton of steel, about one-seventh of the current 2.2 tons of emissions.

The bad news is that

adopting these technologies at the necessary scale requires not only huge capital investments, but massive amounts of cheap green energy and coordinated government regulations and incentives across all countries, from resource producers like Australia to steel makers like China and Iapan.

Australia's iron ore ex-



Need buyers: Investors will need a high degree of certainty that there are buyers for green iron. AFP

ports are worth about \$85 billion a year and metallurgical coal a further \$34 billion, but the potential increase in value by switching to producing green iron for export was put as high as \$252 billion a year. That assumes converting most of the current iron ore volumes to green iron through a process of using hydrogen made from renewable energies such as solar and wind.

A more realistic view of converting 40% of iron ore output to green iron by 2050 still yields an impressive value of around \$110 billion per year, to which would be added the value of the other 60% of iron ore still being shipped.

But building the energy and processing infrastructure to achieve this will require massive amounts of capital, running into hundreds of billions of dollars. But before such huge amounts of capital are deployed, investors will need a high degree of certainty.

#### Commitments needed

Steel mills in existing heavyweights like China, Japan and South Korea will need to commit to actually buving green iron.

This means they will have to commit capital to switching steel production from the coal-intensive basic oxygen furnace-blast furnace method to using electric arc furnaces, which can process green governme

Steel makers will also have to agree to invest in Australian green iron plants and share the upfront capital costs.

iron into steel without us-

ing coal for smelting.

Miners are good at digging and shipping iron ore, so they will have to learn how to process the raw ore into pig iron using green hydrogen, which effectively means finding partners with expertise in building firmed renewable power plants and hydrogen production plants.

The problem is aligning all the various parties together in order to kick start what is effectively a new industry, albeit one using an existing raw material.

There is also probably a major role to be played by governments in Australia and across Asia. Low-emissions steel is going to be more expensive to produce than the current high-emissions product.

Experience suggests consumers are unlikely to voluntarily pay more for a low-emissions product, meaning that the steel sector has to either be punished by carbon taxes or incentivised by subsidies in order to switch.

Right now the green iron dream is like a small snowball at the top of a mountain. To start rolling downhill and gaining size and speed it needs some initial momentum.

(The author is a columnist for Reuters)

### What is Green Iron?



Green iron refers to a sustainable process for producing iron and steel, a beacon of hope in our quest for environmentally-friendly manufacturing. This innovative method utilizes renewable energy sources, such as wind and hydropower, to generate green hydrogen. This hydrogen then replaces traditional fossil fuels in the iron ore reduction process, paving the way for a cleaner future.

#### **Definition of Green Iron:**

A sustainable method of steel-making.

Incorporates renewable energy for hydrogen production.

#### **Transformative Energy Sources:**

Wind and hydropower play crucial roles.

Significant reduction in carbon footprints.

#### **How Does Green Iron Work?**



The mechanics of green iron manufacturing are a fascinating blend of chemistry and engineering. Instead of the conventional reliance on coal or natural gas, this innovative process leverages green hydrogen to reduce iron ore into sponge iron, also known as direct-reduced iron. This transition is not just a technical upgrade, but a revolutionary leap towards sustainability.

#### **Reduction Process:**

Green hydrogen reacts with iron ore.

Produces sponge iron, minimizing emissions.

#### **Comparison to Traditional Methods:**

Traditional methods emit excessive CO2.

Green iron aims for over 90% reduction in emissions.

#### **Benefits of Green Iron Production**



The advantages of transitioning to green iron production are manifold, extending beyond mere carbon reduction. This process not only curtails greenhouse gas emissions but also opens the door to economic opportunities and job creation in the green technology sector.

#### **Environmental Impact:**

Potential to cut emissions by over 90%.

Significant reductions in air pollution.

#### **Economic Advantages:**

Job opportunities in new green industries.

Stimulates local economies through sustainable practices.

#### **Global Impact of Green Iron**



Green iron production holds immense potential for transforming the steel industry globally, driving countries towards a zero-carbon economy. By adopting this technology, we can significantly reduce our reliance on fossil fuels and mitigate climate change impacts.

#### **Global Contribution:**

Aims to decarbonize the steel industry.

Supports global climate goals.

#### **Case Studies and Future Prospects:**

Countries investing in green steel technologies.

Innovations in renewable energy applications

#### Early alert





**Al innovation:** An engineer during a presentation on 'Silvaguard', the first autonomous, Al-based drone system for early forest fire detection in Eberswalde, eastern Germany, on Thursday. AFP



#### early forest fire detection

- Dryad demonstrated that its Silvaguard drone system autonomously responded to a controlled fire detected almost instantly by its <u>Silvanet</u> sensor system for ultra-early wildfire detection.
- Upon detection, a Silvaguard drone was released and autonomously navigated to the sensor location, providing real-time aerial observation to pinpoint the fire's location and size, helping to save precious time and resources.



The melting Lewis Glacier, with a pool of meltwater at its base, is seen in Mount Kenya National Park. AFP

#### Climate crisis hastens the melting of Mount Kenya's glaciers

Agence France-Presse

Charles Kibaki Muchiri traced the water trickling across the surface of the Lewis Glacier with his fingers, illustrating how quickly climate change is melting the huge ice blocks off of Africa's secondhighest mountain.

For nearly 25 years, the affable 50-year-old guide has been taking hikers to the peaks of Mount Kenya, nearly 5,000 metres above sea level, and observing their transformation from a landscape of snow and ice, to brown rock.

"It was very beautiful," he said. He recalled the ice caves and thick layer of snow that lasted several months on the peaks of this ancient volcano.

The Lewis Glacier once covered one of Mount Kenya's slopes. The imposing mass of ice visible in archive photos has now been reduced to just two blocks - the biggest only a few dozen metres

Mr. Muchiri said he fears the glacier will be entirely gone in a few years, transforming the landscape and discouraging visitors. His observations are backed up by numerous studies, while scientists have found ice loss from the world's glaciers has accelerated over the past decade.

Mount Kenya is one of the only mountains on the African continent with glaciers, and scientists fear that as soon as 2030, it could become one of the first to turn entirely ice-free in modern times.

The Lewis Glacier lost 90% of its volume between 1934 and 2010, according to a 2011 study led by Rainer Prinz of Austria's University of Inns-

A satellite study last year found that the surface area of the ice on Mount Kenva was just 4.2% of the size compared with the first reliable observations in 1900.





#### **Lewis Glacier on Mount Kenya**



- rapid melting of the Lewis Glacier on Mount Kenya due to climate change.
- Glacier Reduction: The Lewis Glacier has significantly diminished, now reduced to just two small blocks, with the largest only a few dozen meters wide
- Lewis Glacier lost 90% of its volume from 1934 to 2010, as reported in a 2011 study.

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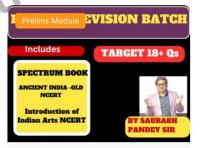
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Q. "Implementing trilingual policy will have both cultural and cognitive challenges" Discuss

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