# Topics - MINDS MAPS included (Daily current affairs 10th December 2024

SAURABH PANDEY
CSE
PROFESSION OF RELIANCE
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- Supreme Court's Stance on West Bengal's OBC Policy
- Fundamental particles
- Global Drying Trends and Impacts
- Food insecurity and energy poverty.
- Right to Disconnect in India: An Overview
- New Merchant Shipping Bill
- Los Escobazos:
- Mains



By saurabh Pandey



# **Target Mains -2025/26 -**

Q 'The definition of backwardness in india is 'identity' based as a result social and economic transformation will not bring the desired outcome' Discuss

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# Reservation must not be based on religion, SC tells West Bengal



#### Krishnadas Rajagopal

NEW DELHI

The Supreme Court on Monday orally observed that reservation must not be based on religion while hearing an appeal filed by the State of West Bengal against a Calcutta High Court judgment striking down its policy to include several castes, largely Muslim communities, in the State's Other Backward Classes (OBC) list.

The High Court had concluded that religion was the "sole criterion for declaring these communities as OBC". It had found the "selection of 77 classes of Muslims as backwards an affront to the Muslim community as a whole".

Senior advocate Kapil Sibal, appearing for the State with advocate Astha Sharma, said the criterion for including Muslim communities in the OBC list was based on backwardness and not religion.

The Bench of Justices B.R. Gavai and K.V. Viswa-



appeal filed by West Bengal against a High Court judgment on OBC list. PTI

nathan scheduled the case for hearing on January 7.

In an earlier hearing, the top court had asked the State to clarify the nature and scope of the survey undertaken to identify the social and educational backwardness of these communities and their inadequacy of representation in the State public services which warranted their inclusion in the list.

The court had asked the State to respond to allegations that no meaningful consultations were held by the State with the West Bengal Backward Classes Commission before the designation of these communities as OBCs.

The court had also asked West Bengal to include details of whether consultation was done while sub-classifying these castes for the purpose of reservation. "The State shall clarify the nature of the survey and material in its possession which led to the inclusion," the apex court had said.

The High Court judgment had struck down portions of the West Bengal Backward Classes (Other than Scheduled Castes and Scheduled Tribes) (Reservation of Vacancies in Services and Posts) Act, 2012. and had impacted five lakh OBC certificates issued in the State since 2010. The High Court had, however, clarified that its judgment would not impact individuals who had already secured employment using the OBC certificates issued since 2010.

# **Topic** → **Supreme Court's Stance on West Bengal's OBC Policy**



### **Key Developments**

m Supreme Court's Position: The court emphasized that reservations should not be based on religion during a hearing on West Bengal's OBC policy.

Appeal by West Bengal: The state challenged a Calcutta High Court ruling that categorized the inclusion of certain Muslim communities in the OBC list as religious.

High Court's Findings: The selection of 77 Muslim classes as backward was seen as an affront to the Muslim community.

Argument by Kapil Sibal: He contended that the inclusion was based on backwardness, not religion.

SAURABH PANDEY

CSE

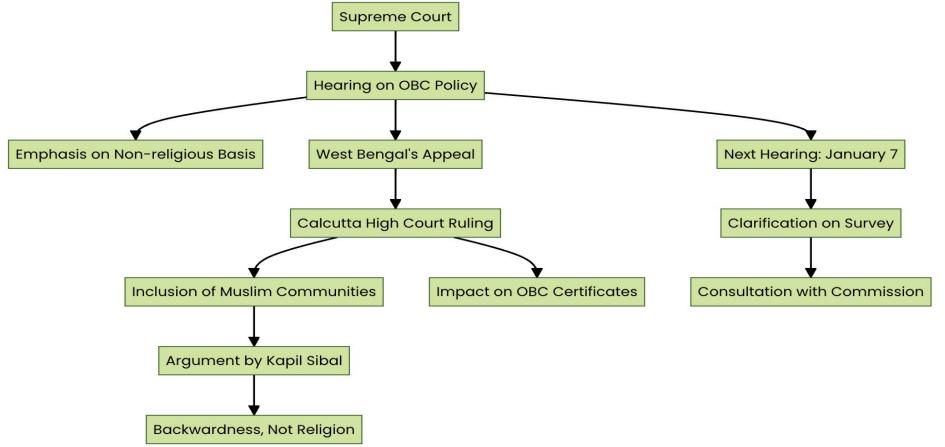
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Consultation Details: The court requested information on consultations with the West Bengal Backward Classes Commission before designating these communities as OBCs.

Impact of High Court Judgment: Affected five lakh OBC certificates issued since 2010, but clarified it would not impact those already employed using these certificates.

## Logical Flow of the Case:



**Summary:** The Supreme Court is scrutinizing West Bengal's OBC policy, focusing on ensuring reservations are not religion-based, following a High Court decision against the inclusion of certain Muslim communities.

# Antimatter idea offers scientists clue to cracking cosmic mystery

If the universe started off with equal amounts of matter and antimatter, where has all the antimatter gone? Nobody knows for certain and the best current theory to explain the world fell woefully short of satisfying three crucial conditions, until a new study pointed out a caveat

#### Nirmal Rai

ne of the most astonishing facts about the natural world is the existence of antiparticles Theorised by the English physicist Paul A.M. Dirac in 1928 and observed in cosmic rays by American physicist Carl Anderson in 1932, an antiparticle is a 'partner' of a particle type that has the same mass but opposite charge. For example, the antielectron is the antiparticle of the electron; it has the same mass and is positively charged

Antiparticles are an inevitable consequence of describing the world in terms of quantum mechanics and special relativity

An antiparticle is a particle travelling backward in time. This is not an oversimplification. If it sounds eerie. that's because it is.

#### O antimatter, where art thou?

But where is all the antimatter made of antiparticles? It is certainly scarce, or we would have discovered it a long time ago. Still antiparticles are detectably numerous. Our own bodies make one antielectron every 20 seconds from the decay of potassium-40. Cosmic rays raining down on us supply antiprotons, antielectrons and even antinuclei Every proton and neutron - constituents of the nuclei that make up all the matter we can touch - is teeming with antiquarks.

But it is when we look out at the universe as a whole that antimatter's scarcity becomes clear. All galaxies are made of matter, not antimatter. Even in the infant universe, there had to have been a small dissimilarity between the populations of protons and antiprotons for our predictions about the outcomes of the synthesis of nuclei in the early universe and the features of the cosmic microwave background (radiation leftover from the Big Bang) to hold.

That is, for every 1.7 billion proton-antiproton pairs, there should have been an extra unpaired proton.

Presumably the universe started out with equal amounts of matter and antimatter before something happened to distort this symmetry. That's a good thing: otherwise matter and antimatter would have mutually annihilated to fill the universe with nothing but a fog of radiation - no raw material to make stars, planets or us.

But what spoiled the symmetry? Put differently, why is there something around us rather than nothing (but that fog)? Nobody knows for certain. What we do know is that any theory attempting to explain it must satisfy three conditions. called the Sakharov conditions. The best current theory to explain the world, the Standard Model of particle physics, falls woefully short of meeting all of them.

At least this was the lore until the authors of an August 2024 preprint paper pointed out an interesting caveat.

They showed that one of the conditions can be satisfied by the Standard Model alone, provided some new particle species helps with the process of making

An unsettling discovery Look at the world in a mirror. Does it look the same? Apples would still fall and moons would circle planets because gravity would be unchanged. Protons and neutrons would cling to form nuclei



Cosmic puzzle: This composite image pieced together by data from multiple telescopes shows a part of the Milky Way galaxy's central region. The bright white violated all the time - which made it

ortion hosts a supermassive black hole as well as energetic particle reactions that produce antimatter, PUBLIC DOMAI

because the strong nuclear force would be preserved. But atomic nuclei won't undergo radioactive fission because that happens via the weak force. And the weak force, like a vampire, vanishes in the mirrorworld

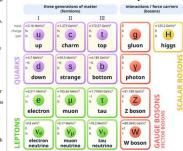
The discovery of this fact in 1957 was profoundly unsettling because it struck at cherished notions of symmetry in nature. A parity transformation (denoted P) - the act of swapping left and right - appeared to eliminate the weak force. But soon physicists found that if they replaced a particle with its antiparticle in the mirror-world, the weak force reappeared. This action is called charge conjugation (C). It seems the universe didn't conserve P and C separately but did so when they happened together. This is called CP

But in 1964, American physicists James Cronin and Val Fitch found that even CP symmetry is violated. And it wasn't

more nagging. They found that it was violated around once for every thousand times a process involving the weak force happened in nature. Nine years later, Makoto Kobayashi and Toshihide Maskawa in Japan found that if there were at least three variants of every quark species - with all properties the same except for the mass - CP symmetry violation is unavoidable. And all fermion particles do come in three variants, a.k.a. generations. For instance, the up quark has two other variants: the charm and ton quarks. (Around the same time, physicists also found that the strong nuclear force involved in fission and fusion - ought to

This is called the strong CP puzzle.) Now, as soon as CP symmetry violation was confirmed the Soviet physicist Andrei Sakharov realised it's actually an essential condition to create a

#### **Standard Model of Elementary Particles**



The (current) crop of fundamental particles making up matter as we know it and the different ways they can interact. The W and Z bosons mediate the weak force, PUBLIC DOMAIN

matter-antimatter asymmetry in the early universe. Unfortunately, the amount of CF symmetry violation the Standard Model allowed for (the -1 in 1,000 rate) proved insufficient to explain the magnitude of the asymmetry. This is where the authors of the August paper have pointed out a loophole. We have known for some time that processes involving mesons particles made of quark-antiquark pairs violate CP symmetry, which is just how Cronin and Fitch made their discovery Now if a meson could decay to particles not contained in the Standard Model, the matter-antimatter asymmetry could be controlled by the product of two quantities: the amount of standard CP violation and the fraction of decays into violate CP symmetry strongly but doesn't. the non-standard particles. This fraction can't be too large: otherwise we would have detected the non-standard particles in particle colliders.

The study's conceit, then, is to introduce a mechanism that ensured this fraction was large just in the early universe but evolved to a smaller number today. This can be done if the masses of the new particles vary over time, which is possible to arrange in quantum field theory.

#### Hard-won progress This mechanism has thus brought one of the three Sakharov conditions within the reach of the Standard Model five decades

since these conditions came to light. The other two conditions are: (i) A large violation in a type of charge carried by particles, called the baryon number For example, protons and neutrons have a baryon number of 1 and their antiparticles carry a value of -1. (ii) Interactions must occur out of therma equilibrium, meaning that particle processes in the forward and backward directions do not occur at the same rate.

While the Standard Model does not meet these conditions adequately, the work discussed here serves as an important step towards understanding why matter overwhelmingly dominate over antimatter in our universe today. (Nirmal Rai is an assistant professor o theoretical physics at the Centre for High Energy Physics in the Indian Institute of Science, Bengaluru, nrai@iisc.ac.in)



# **Topic** → **Fundamental particles**



Fundamental particles are the building blocks of matter, which include quarks, leptons, and gauge bosons. They form the foundation of everything we see around us. Here's a quick breakdown of the different types:

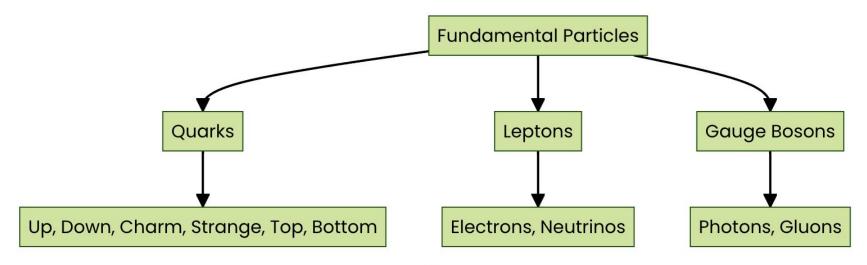
**Quarks**: These particles combine to form protons and neutrons. There are six types (flavors) of quarks: up, down, charm, strange, top, and bottom.

**Leptons:** This group includes electrons and neutrinos. Electrons are vital for chemical reactions, while neutrinos are elusive and interact very weakly with matter.

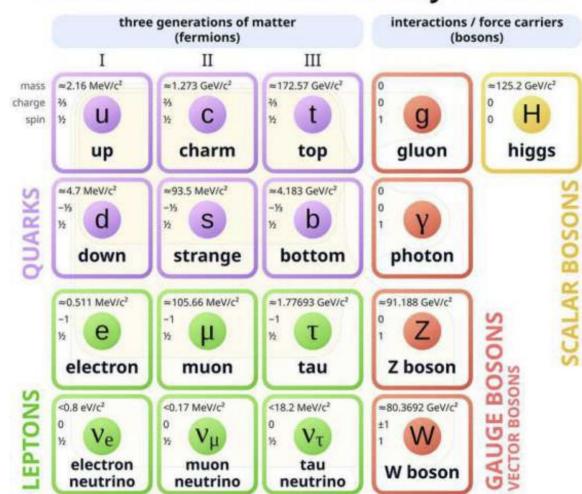
**Gauge Bosons:** These particles are responsible for mediating the forces between fundamental particles. Examples include photons for electromagnetic force and gluons for the strong force.



Figure 1.1: Fundamental Particles Overview:



# **Standard Model of Elementary Particles**



# The Enigma of Antimatter



Antimatter is the mysterious counterpart to matter, consisting of antiparticles that have the same mass but opposite charge. For instance, the antimatter equivalent of an electron is a positron. Some intriguing points about antimatter include:

**Production:** Antimatter is not naturally abundant and is produced in minute quantities in high-energy processes.

**Applications:** Its potential in medical imaging (like PET scans) and theoretical propulsion systems (like antimatter engines) is tantalizing.

**Research:** The search for antimatter helps scientists understand why our universe is dominated by matter rather than antimatter.



# **Latest Discoveries in Particle Physics**

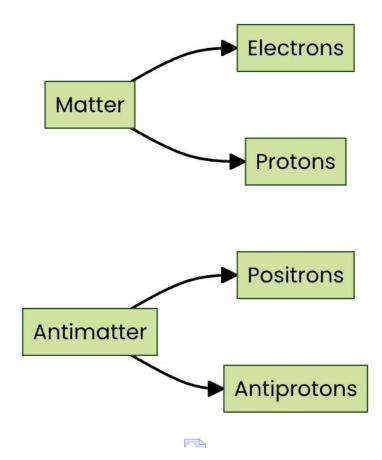
Recent breakthroughs in the field of particle physics continue to unveil the mysteries of fundamental particles and antimatter. Noteworthy findings include:

**Quantum Entanglement:** A recent study confirmed that quantum entanglement persists among top quarks, crucial for understanding the interactions within our universe.

**Heaviest Antimatter Observation:** A new observation of heavier antimatter particles provides valuable data for dark matter research



Figure 2.1: Antimatter vs Matter:





experienced drier conditions from 1970 to 2020 than the previous thirty-year period APP

#### UN talks in Riyadh keep focus on land degradation

#### Associated Press

Much of the earth's lands are drying out and damaging the ability of plant and animal life to survive, according to a United Nations report released Monday at falls where countries are working to address the problem.

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world deal with droughts - a more urgent lack of water over shorter periods - and the more permanent problem of degrading land.

If global warming trends continue, nearly five billion people - including in most of Europe, parts of the western U.S.,

Farming is particularly at risk, with drier land being less productive and hurting both yields and the availability of food for livestock, the report said

Brail, castern Asia and central Africasull be affected by the drying by the end of the century, up from a quarter of the world's population today, the report warmed. UNCCD's chief scientist Barron Grr warmed direct land could lead to "potentially catistrophic impacts" people and nature even closer to disastrous tipping points," where humans are no longer able to reverse demanging

are no longer able to reverse damaging effects of climate change, me of the lead Seepgo Wester-Serratos, of the lead Seepgo Wester-Serratos, that as the amount of the lead of

communities worldwide.

Aridity also leads to more migration, because erratic rainfall, degrading land and frequent water shortages make it harder for regions or nations to develop economically the report said it said the trend is especially noticeable in some of the world's direct areas such as southern Europe, the Middle East and North Africa and southern Asia. Negotiators in Rhyadh are mainly discussing how best the world and respond to more frequent to more frequent and the southern and the

Europe, the Middle Bast and North Africa and southern Asis. Nepotitors in Ripadh are mainly discussing how best the world champing choughts.

Jes Weight, of European climate thinktant YinG, aid it still a sticking point because countries can't agree on the world. Any money picking world and control of the property of the world and monitoring systems as well as creating reservoirs and other water management



# **Topic** → **Global Drying Trends and Impacts**



# Global Drying Trends

Over three-quarters of the world's land has experienced drier conditions from 1970 to 2020.

These conditions are worsening the survival of plant and animal life.

# Climate Change Impact

Human-caused climate change, deforestation, and water scarcity are turning once-fertile lands into deserts.

There is no return to previous conditions for these lands.

# Future Projections

By the end of the century, nearly five billion people could be affected by drying conditions.

This is a significant increase from a quarter of the global population today.

# **K** Agricultural Risks

Drier land threatens farming productivity.

This leads to food insecurity and reduced availability of food for livestock.



# **Migration Concerns**



Increased aridity is causing more migration.

Erratic rainfall and land degradation hinder economic development in affected regions.

# **š** Funding Disputes

Negotiations at the UN summit focus on whether wealthy nations should fund global drought responses.

This includes better forecasting and water management systems.

# 77 Ongoing Discussions

The UN summit in Riyadh is addressing urgent strategies to combat droughts and land degradation.

Talks are set to conclude on Friday.

**Summary:** A UN report highlights the alarming trend of global land drying due to climate change, threatening ecosystems, agriculture, and human populations, while nations discuss funding and strategies to combat these issues.

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# In energy-dependent world, the issue of food security

"A

ddressing food insecurity and energy poverty is central to achieving global stability, but tackling these issues

independently is no longer sufficient," warns the World Bank in its latest report on climate and development. The intertwined crises of food and energy security are defining the trajectory of the 21st century, casting a long shadow over global stability. Both systems are under siege - food production is strained by climate change, population growth, and inequality, while energy systems face geopolitical tensions, outdated infrastructure, and the slow transition from fossil fuels. Yet, their interconnectedness presents an even greater challenge: agriculture, a lifeline for humanity, is both a significant energy consumer and a contributor to climate change. As the world teeters on the edge of multiple tipping points, can we truly address one without confronting the other?

#### Dependency on carbon-intensive energy

Agriculture consumes nearly 70% of global freshwater resources and is responsible for over 20% of greenhouse gas emissions. Its dependence on fossil fuels – for mechanisation, irrigation, fertilizer production, and transportation –has created a vicious cycle of environmental degradation. This reliance also exposes food systems to energy price shocks, threatening global stability. Rising temperatures and erratic weather patterns further disrupt agricultural output, putting the livelihoods of 2.5 billion people at risk. Between 2020 and 2023, nearly 11.8% of the global population faced severe food insecurity, a figure projected to rise to 956 million by 2028.

Renewable energy investments reached \$500 billion in 2022, but fossil fuel consumption remains robust due to short-term economic and geopolitical pressures. Nations such as the United States, Brazil, and Guyana continue to expand oil and gas production, prioritising exports and domestic energy security. This ongoing dependency on carbon-intensive energy exacerbates the vulnerability of global food systems, particularly in regions with limited



Anupama Sen

associated with the UK Trade Policy Observatory (UKTPO), University of Sussex



**Amit Mitra** 

with the National Council of Applied Economic Research, New Delhi

There is a need to reimagine agriculture, with the twin crises of food and energy insecurity set to challenge global priorities access to reliable energy. Energy poverty reveals sharp global inequities. Low-income countries account for a small fraction of global energy demand but suffer disproportionately from supply disruptions. Extreme weather events frequently damage energy infrastructure in regions where power grids are already unreliable. In rural areas, energy deficits hinder agricultural productivity, leading to higher food prices and deepening poverty. In sub-Saharan Africa, per-hectare fertilizer usage remains far below the global average, contributing to food insecurity despite \$1.9 billion spent on fertilizer imports by the top 10 African importing countries in 2021 – more than double the amount in 2016.

Agriculture's reliance on fossil fuels further highlights its vulnerability. Natural gas, critical for fertilizer production, is both a feedstock and an energy source, with 80% of it used for ammonia synthesis and 20% powering the process. Volatility in natural gas prices directly impacts fertilizer costs and global food prices. Geopolitical actions, such as China's 2021 ban on phosphate fertilizer exports, disrupt agricultural supply chains. India, which imports 60% of its diammonium phosphate (DAP) fertilizers, experienced significant delays during critical cropping seasons, exposing its vulnerability to external shocks.

Renewable energy offers a glimmer of hope, but its deployment remains uneven. High-income countries installed 83% of new renewable capacity in 2022, leaving low-income nations reliant on outdated, carbon-intensive systems. While solar-powered irrigation and biomass energy solutions could transform agriculture, high costs and inadequate infrastructure limit their reach. The transition risks bypassing those who need it most.

#### Demands on agriculture

Meanwhile, agriculture is being increasingly burdened with competing demands. Beyond feeding a growing population, it is expected to support the global energy transition by producing biofuels. This dual role often pits food security against energy needs, as biofuel production requires vast land and water resources. In a world where nearly 12% of the population faces hunger, is prioritising energy over food morally defensible? The financial costs of addressing food and energy insecurity are substantial yet achievable. The World Food Security Outlook estimates that ensuring basic caloric needs for the world's most vulnerable populations will require \$90 billion annually until 2030. Tackling malnutrition among women and children demands an additional \$11 billion per year, while transforming global food systems could cost \$300 billion-\$400 billion annually – just 0.5% of global GDP. However, for low-income nations, these costs are staggering, with food insecurity expenses in some cases surpassing 95% of GDP.

The implications of inaction are dire. Food insecurity is projected to cost the global economy trillions in lost productivity and adverse health outcomes. Climate-induced energy disruptions threaten to destabilise entire regions, driving social unrest and mass migration. For example, Africa's mineral wealth, essential for renewable technologies, is often extracted without benefiting local economies, perpetuating cycles of poverty and underdevelopment.

#### Need for inclusivity

Despite record investments in renewables, fossil fuel expansions continue unabated. Every delay compounds the human, environmental, and economic costs, narrowing opportunities for a resilient future. Clean energy solutions must address structural barriers to inclusivity, ensuring that the most vulnerable communities are not left behind.

Ultimately, the twin crises of food and energy insecurity challenge global priorities. The solutions are within reach, but they require a fundamental shift in perspective. Agriculture must be reimagined as both a source of sustenance and a cornerstone of sustainable development. Failure to act will create the risk of pushing millions into hunger and undermining global climate goals. As the clock ticks, the question remains: will the world rise to meet the moment?





# **Topic** → **Food insecurity and energy poverty.**

The World Bank recently highlighted that tackling these two intertwined crises is crucial for achieving global stability.

# The Interconnected Crises of Food and Energy Security

The Current State of Food Production

Food production is facing a perfect storm. Climate change, population growth, and inequality are all putting immense pressure on our food systems.

# **Climate Change and Agriculture**

Agriculture is a significant energy consumer, and it's also a major contributor to climate change. It's a double-edged sword.

As temperatures rise and weather patterns become more erratic, agricultural output is disrupted, putting the livelihoods of billions at risk.

# **Geopolitical Tensions in Energy Supply**

On the energy front, geopolitical tensions and outdated infrastructure are making things even messier. Countries are scrambling to secure their energy supplies, often at the expense of global stability.

Dependency on Carbon-Intensive Energy

# **Agriculture's Heavy Footprint**



agriculture consumes nearly 70% of the world's freshwater resources and is responsible for over 20% of greenhouse gas emissions

That's a hefty price to pay for our food. The reliance on fossil fuels for everything from mechanization to transportation creates a vicious cycle of environmental degradation.

# The Vicious Cycle of Energy Price Shocks

This dependency also makes food systems vulnerable to energy price shocks. When energy prices spike, food prices follow suit, and that's a recipe for disaster.

# The Impact of Energy Poverty

Energy poverty is a stark reality for many low-income countries. They account for a tiny fraction of global energy demand but suffer disproportionately from supply disruptions. It's like being stuck in a traffic jam while everyone else zooms by.

# The Struggles of Low-Income Countries



In rural areas, energy deficits hinder agricultural productivity, leading to higher food prices and deepening poverty.

For instance, in sub-Saharan Africa, fertilizer usage is far below the global average, contributing to food insecurity.

# Renewable Energy: A Path Forward?

The Uneven Deployment of Renewables

Renewable energy investments are on the rise, but the deployment is uneven. High-income countries installed 83% of new renewable capacity in 2022, leaving low-income nations in the dust.

# The Promise of Solar and Biomass



While solar-powered irrigation and biomass energy solutions could revolutionize agriculture, high costs and inadequate infrastructure limit their reach. It's like having a shiny new toy but not being able to play with it.

# **Competing Demands on Agriculture**

Agriculture is being asked to do double duty—feeding a growing population while also supporting the global energy transition through biofuels. This often pits food security against energy needs, raising ethical questions about priorities.



# The Economic Burden of Food Insecurity

The financial costs of addressing food and energy insecurity are substantial but achievable. The World Food Security Outlook estimates that ensuring basic caloric needs for vulnerable populations will require \$90 billion annually until 2030.

# The Need for Inclusivity in Solutions

Despite record investments in renewables, fossil fuel expansions continue. Every delay compounds the human, environmental, and economic costs. Clean energy solutions must address structural barriers to inclusivity, ensuring that vulnerable communities are not left behind.

### Conclusion

The twin crises of food and energy insecurity are challenging global priorities. The solutions are within reach, but they require a fundamental shift in perspective. Agriculture must be reimagined as both a source of sustenance and a cornerstone of sustainable development. The clock is ticking—will the world rise to meet the moment?

# Indians need the right to disconnect



Tharoor had said that he would raise the issue in Parliament. He workplace must be legislated out of existence." A recent report by The Hindu reveals that Indian women in professional jobs, such as auditing, Information Technology, and media, work more than 55 hours a week. The working hours vary for those who belong to the marginalised sections of society and work in the unorganised sector. According to a study by ADP Research Institute, 49% of Indian workers said workplace stress negatively impacts their mental health. As French politician Benoit Hamon said, "Employees physically leave the office, but they do not leave their work. They remain attached by a kind of electronic leash like a dog. The text, the messages, the emails colonise the life of the individual to the point where he or she eventually breaks down".

#### Right to disconnect laws

Such tragic incidents, research,

and statements highlight how the right to disconnect is an important right. It allows employees to disconnect from their employer outside of working hours. The Labour Chamber of the French Supreme Court ruled in 2001 that an employee is under no obligation to work from home or take home files and working tools. This decision was subsequently confirmed by the Cour de Cassation (the highest court in the French judiciary), which said, "The fact that [the employee] was not reachable on his cell phone outside working hours cannot be considered as a misconduct". Portugal has a Right to Disconnect law, which makes it illegal for employers to contact employees outside working hours, except in emergencies. Similarly, according to Article 88 of the Organic Law 3/2018 on the Protection of Personal Data and Guarantee of



Rajesh Ranjan

Lawyer and researcher and former co- convenor, Constitutional law Society, National Law University, Jodhpur

workers and employees shall have the right to switch off devices in order to guarantee that, outside of legal or conventionally established working hours, their time off, leave and holidays are respected, in addition to their personal and family privacy, with the aim of promoting a good work-life balance". This year, the Australian Parliament passed the Fair Work Legislation Amendment, which gave employees the right to disconnect from work outside of working hours. Ireland has also recognised the right to disconnect for employees.

Digital Rights in Spain, "Public

#### Where does India stand?

India does not have specific laws

recognising the right to disconnect from work. However, the Constitution, the Directive Principles of State Policy, and various judicial pronouncements have spoken of the right to work in a conducive and healthy environment. Article 38 of the Constitution mandates that "the State shall strive to promote the welfare of the people". Article 39(e) of the Directive Principles of State Policy directs the state to direct its policy towards securing the strength and health of its workers. The Supreme Court, in Vishakha v State of Rajasthan (1997), ruled that sexual harassment at the workplace violates fundamental rights, recognised the right to dignity at the workplace, and issued guidelines to ensure that there is a safe working environment for women and gender equality. In Ravindra Kumar Dhariwal and Ors v. Union of India (2021), the Court read Article 14 to include ideas of inclusive equality to reasonably accommodate persons with disabilities, Justice D.Y. Chandrachud said that an employer must consider an

India must recognise that the right to disconnect will productivity and employee's individual differences ensure the and capabilities. In Praveen overall growth Pradhan v. State of Uttaranchal and well-being (2012), the High Court of of employees Uttarakhand held that "under the and employers pretext of administrative control

increase

and discipline, a superior officer cannot be left to enjoy extreme liberty to make the intense humiliation and scolding inhumanly in front of all the subordinate staff members for a little lapse." Despite the clear recognition of the right to dignity at the workplace and a direction for employers to be sensitive towards mental health concerns, and also laws that fix accountability in the case of breaching working hours, violating dignity is unfortunately common in Indian workplaces.

#### Prolonged working hours

In 2018, MP Supriva Sule introduced a Private Member Bill in the Lok Sabha, which delineated the right to disconnect from work after working hours. The bill included the provision of a penalty of 1% of the total renumeration of all employees to be paid by companies for noncompliance with its provisions. However, in recent years, there

has been no significant legislative effort to recognise employees' right to disconnect from work outside working hours or to impose a duty on employers to be mindful of employee well-being and avoid overworking them. Research by Harvard Business Review shows that working prolonged hours causes stress, coronary heart diseases, and impacts overall health. Contrary to the widespread belief that overworked human beings bring in productivity, research by the University of Oxford in collaboration with British multinational telecoms firm BT found a conclusive link between happiness and productivity. Therefore, employers need to take into account psychological factors while dealing with employees. In its march towards becoming the third largest economy by 2030. India must recognise that the right to disconnect will increase productivity and ensure the growth and well-being of both employees and employers.



# **Topic** → **Right to Disconnect in India: An Overview**



# **Key Aspects of Workplace Rights in India**

Lack of Specific Laws: India does not have specific laws that recognize the right to disconnect from work.

**Constitutional Mandates:** The Indian Constitution and Directive Principles emphasize the right to work in a conducive and healthy environment.

Article 38 of the Constitution mandates that "the State shall strive to promote the welfare of the people". Article 39(e) of the Directive Principles of State Policy directs the state to direct its policy towards securing the strength and health of its workers. The Supreme Court, in Vishakha v State of Rajasthan (1997), ruled that sexual harassment at the workplace violates fundamental rights, recognised the right to dignity at the workplace, and issued guidelines to ensure that there is a safe working environment for women and gender equality. In Ravindra Kumar Dhariwal and Ors v. Union of India (2021), the Court read Article 14 to include ideas of inclusive equality to reasonably accommodate persons with disabilities



- Supreme Court Rulings: The Supreme Court has ruled that sexual harassment at the workplace violates fundamental rights and has issued guidelines for a safe working environment.
- Inclusive Equality: The Court has recognized the need for inclusive equality, accommodating individuals with disabilities in the workplace.
- Workplace Dignity: Judicial pronouncements highlight the importance of dignity at work, yet violations of this right remain common in Indian workplaces.
- Mental Health Sensitivity: Employers are directed to be sensitive to mental health concerns, but accountability for breaches of working hours is still lacking.
- Ocommon Violations: Despite legal frameworks, violations of dignity and mental health concerns are prevalent in Indian workplaces.

Summary: India lacks specific laws for the right to disconnect from work, but judicial rulings emphasize workplace dignity and mental health, despite ongoing violations

# On reforms in merchant shipping

Have the Merchant Shipping Act, 1958, and the Coasting Vessels Act, 1838 failed in addressing the contemporary needs of the merchant marine sector? What are some of the international maritime conventions that India has ratified? Will the new Bills address maritime training and education as well?

EXPLAINER

Amitabh Kumar

The story so far:

he Government is preparing to introduce several significant bills aimed at driving much-needed reforms in the shipping industry. Key among them are the Merchant Shipping Bill, 2024 and the Coastal Shipping Bill, 2024, both of which promise to bring transformative changes to boost the sector.

Why a new bill? The Merchant Shipping Act, 1958, and the Coasting Vessels Act, 1838, which the new bills aim to repeal, have become outdated and fail to address the contemporary needs of the merchant marine sector. Significant regulatory gaps exist, particularly for yessels operating in the offshore sector which comprise nearly 50% of Indian-flagged vessels Furthermore, maritime training was liberalised allowing private sector participation, yet there is no legal ramework in the existing Act to regulate their activities effectively

The Merchant Shipping Act, 1958, also restricts seafarers' welfare provisions to Indian-flagged ships, despite 85% of the 2,80,000 active Indian seafarers working on foreign-flagged vessels. Additionally, the Act lacks enabling provisions for implementing certain international conventions that India has signed or plans to ratify Crucially the outdated license-era provisions of the Act have become a roadblock to modernising maritime administration, which needs to transition from being a mere regulator to a regulator-cum-facilitator, thereby promoting the 'ease of doing business.'

#### What are the features of the Merchant Shipping Bill?

The Merchant Shipping Bill introduces significant changes to modernise India's naritime framework, drawing upon the best practices of leading maritime jurisdictions like the U.K., Norway, and Singapore. Some of the key reform

measures include: i) Ease of registration: the existing law restricts vessel registration to entities with 100% Indian ownership. The new Bill proposes significant reforms to attract foreign investment. It also reduces the ownership threshold for Indian citizens/entities from 100% to 51%. enabling more flexibility. It allows Limited Liability Partnerships (LLPs), Non-Resident Indians (NRIs), and Overseas Citizens of India (OCIs) to own and register Indian vessels. This is in line with the law of the U.S. where Green card holders are permitted to own American flagships or Singapore law where permanent residents can own ships of their flags. It also permits foreign entities to hold shares in Indian vessels while ensuring majority ownership remains with Indian entities NRIs or OCIs

Additionally the Bill allows the registration of vessels chartered by Indian entities under the bareboat charter-cum-demise, enabling entrepreneurs to acquire ownership of vessels at the end of the charter period. This provision, particularly beneficial for capital-deficient entrepreneurs, facilitates entry into the shipping industry without

India is the second largest ship recycling centre after Bangladesh, and the ship recycling industry practises the concept of cash purchase of the vessel before it is brought for demolition. Often



Quick change: Catamaran boats pass by a merchant navy ship anchored off Visakhapatnam. FILE PHOTO

it becomes difficult for cash buyers to register the vessels for their final voyage as they no more remain 'seaworthy'. To address challenges faced by the ship recycling industry, the Bill introduces provisions for temporary registration of vessels destined for demolition. This measure is expected to bolster activities at India's ship recycling hubs like Alang.

ii) Enlarging the scope of vessels: the existing Act regulates only mechanised ships (engine-fitted vessels) above a certain size, leaving smaller mechanised vessels and all non-mechanised vessels outside its ambit. This regulatory gap has allowed many vessels to operate without adequate oversight. India's offshore drilling sector gained prominence in 1974 when Sagar Samrat, a merchant vessel designed for exploratory offshore drilling, drilled the first well in Bombay High. Since then, the offshore sector has employed a diverse range of mechanised and non-mechanised vessels, such as accommodation barges, work barges, submersibles, and drones. However, these vessels remain either unregulated or inadequately regulated under the current framework, exposing the sector to operational and safety risks. The new Bill seeks to address this issue

by expanding the definition of 'vessels' to uniformly include a wide range of crafts, including submersibles. semi-submersibles, hydrofoils non-displacement crafts, amphibious crafts, wing-in-ground crafts, pleasure crafts, barges, lighters, Mobile Offshore Drilling Units (MODUs), and Mobile Offshore Units (MOUs), whether mechanised or not. This definition is expected to enhance transparency and ensure comprehensive regulatory oversight in the offshore sector

Furthermore, the 26/11 Mumbai attacks, which exploited gaps in maritime security, underscored the urgent need for stricter regulation of all categories of vessels. By empowering authorities to issue instructions to all types of vessels, the new Bill aims to strengthen coastal

security, making India's coastline safer and more secure.

#### What about marine pollution?

The Government has recently undertaken several initiatives to minimise pollution from shipping activities. Some of the measures include reducing the sulphur content in marine fuel from 3.5% to less than 0.5%, banning the use of single-use plastics on Indian ships, and launching the online portal 'Swachh Sagar' to facilitate the proper disposal of

The Government has taken a significant ship-generated waste at Indian ports. step by distinguishing between the The International Maritime technical regulation of ships and the Organization (IMO) has adopted several commercial utilisation of Indian coasta conventions aimed at preventing and waters, removing provisions related to the combating marine pollution, such as the latter from the Merchant Shipping Act. Civil Liability Convention (CLC), the These aspects, including licensing. Convention on Limitation of Liability on nermissions for operations along the Maritime Claims (LLMC), the Bunker Indian coast and Exclusive Economic Convention, the International Convention Zone (EEZ), creation of a coastal plan for the Prevention of Pollution from Ships involving the Union and States, and the (MARPOL), and the Wreck Removal integration of inland and coastal shipping. Convention. The existing law, however, have been incorporated into the proposed has either omitted or partially Coastal Shipping Bill, 2024. This focused implemented these conventions. The new approach aims to foster growth and development of the Indian coastal sector. Bill fully incorporates these international conventions, aligning India's maritime regulatory framework with global Government's flagship 'Sagarmala' standards. This comprehensive approach program, which emphasises the reinforces India's commitment to promotion of coastal shipping through combating marine pollution and initiatives like dedicated berths for coastal safeguarding the maritime environment vessels and enhanced hinterland

#### for sustainable shipping practices. What are provisions for seafarers'? The remarkable growth in the number of

Indian seafarers employed on foreign-flagged ships over the last 7-8 vears stands out as one of the biggest success stories in Indian merchant shipping. The workforce has grown from 1,16,000 in 2015-16 to 2,85,000 today. with nearly 85% of these seafarers serving on foreign-flagged vessels

However, the existing Act lacks provisions for the welfare and safety of this vast workforce working on foreign-flagged vesels. The proposed Bill addresses this gap by extending the scope government to include Indian seafarers working on foreign-flagged ships as well. Furthermore it seeks to extend the

protections and benefits outlined in the

systems for those contributing to the

What about maritime training?

of the mercantile marine and the

conducted by government-run

institutions directly under the

regulate these institutions

global maritime industry.

Maritime Labour Convention (MLC) to all

Indian seafarers, ensuring better working

conditions, safety standards, and support

Under Entry 25 of List 1 (Union List) of the

responsible for the education and training

regulation of such education and training

royided by States and other agencies. It

the past, maritime training was primarily

administrative control of the maritime

Shipping, Consequently, there was no

need for a specific legal framework to

However, following economic

liberalisation, maritime training was

opened to the private sector. Today, over

160 maritime training institutes operate

across the country, yet their activities are

orders, and notifications rather than an

gap has allowed unauthorised institutes to

approvals, making it challenging for the

maritime administration to take action

significant anomaly by introducing clear

legal provisions for regulating maritime

training in line with the constitutional

mandate. This step is expected to

eliminate illegal maritime training

practices, which often exploit

maritime education nationwide.

The move aligns with the

connectivity for coastal cargo movement

Infrastructure development and a robust

simultaneously, making the introduction

of the Coastal Shipping Bill both timely

developmental initiative, should remain

bipartisan and above party politics. By

fostering investment, enhancing safety,

proposed reforms promise to unlock the

true potential of India's maritime sector.

Amitabh Kumar is Former Director

General Shipping, Government of India.

combating marine pollution, and

supporting seafarers' welfare, the

Maritime development, like any

and essential.

regulatory framework must progress

institutes and associated fraudulent

unsuspecting rural youth, while ensuring

the delivery of high-quality, standardised

Is there a focus on coastal shipping?

The proposed Bill seeks to address this

governed solely by rules, government

operate without obtaining proper

against offenders

regulator, the Director General of

Constitution, the Union Government is

The Merchant Shipping Bill, 2024 introduces significant changes to modernise India' maritime framework, drawing upon the best practices of leading maritime jurisdictions like the U.K., Norway, and

Under Entry 25 of List 1 (Union List) of the Constitution, the Union Government is responsible for the education and training of the mercantile marine and the regulation of such education and training provided by States and other

agencies

The Government has recently undertaken several initiatives to minimise pollution from shipping activities. Some of the sulphur content in marine fuel from 3.5% to less than 0.5%. banning the use of single-use enabling legal framework. This regulatory



# **Topic** → **The Need for a New Merchant Shipping Bill**



# Why a New Bill?

Outdated legislation: The Merchant Shipping Act, 1958 and Coasting Vessels Act, 1838 no longer meet contemporary needs.

**Regulatory gaps:** Significant issues in offshore sector regulation, with nearly 50% of Indian-flagged vessels affected. 🕹

Lack of training framework: Absence of legal structure to effectively regulate private sector participation in maritime training.

**Seafarers' welfare:** Current provisions limit welfare to Indian-flagged ships, neglecting 85% of Indian seafarers on foreign-flagged vessels.

International compliance: Existing Acts lack provisions for implementing international conventions India has signed.

**Modernization issues:** The current Act hinders transition to a regulator-facilitator model for better business ease.

# **Key Features of the Merchant Shipping Bill**



# **Ease of Registration:**

Ownership threshold reduced from 100% to 51% for Indian citizens/entities.



Allows LLPs, NRIs, and OCIs to own Indian vessels.

Foreign entities permitted to hold shares, ensuring majority ownership remains with Indians.



Temporary registration for vessels destined for demolition to support ship recycling.

# **Enlarged Scope of Vessels:**

Expands definitions to include a wide range of vessels (submersibles, barges, etc.) for better oversight.

Addresses operational and safety risks in the offshore sector. 1



Enhances coastal security by regulating all types of vessels post-26/11 Mumbai attacks. 🔒

# Indian Government's Initiatives to Combat Marine Pollution Key Measures and Initiatives



The Indian Government is actively working to reduce marine pollution from shipping activities.

telow 0.5%.

A ban on single-use plastics has been enforced on Indian ships.

The 'Swachh Sagar' online portal has been launched for the proper disposal of ship-generated waste at Indian ports.

The International Maritime Organization (IMO) has established conventions to combat marine pollution, including MARPOL and the Bunker Convention.

A new Bill has been introduced to fully incorporate these international conventions into Indian law.

This initiative aligns India's maritime regulations with global standards, promoting sustainable shipping practices.

# **Provisions for Seafarers and Maritime Training**



## **Overview**

## **Growth of Indian Seafarers:**

Increased from 116,000 (2015-16) to 285,000 today.

85% serve on foreign-flagged vessels.

## **Lack of Welfare Provisions:**

Existing Act does not address welfare and safety.

Proposed Bill aims to extend welfare measures to Indian seafarers on foreign vessels.

# **Importance of Maritime Training**

# **Government Responsibility:**

Education and training of mercantile marine under Union Government.

# **Regulatory Gaps:**

Historically government-run institutions, now private sector involvement.

Over 160 maritime training institutes lack proper oversight

## **Coastal Shipping**

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## **Key Highlights**

Leave Coastal Shipping Focus: Separation of technical ship regulations from commercial use to streamline the regulatory framework.

[ Coastal Shipping Bill, 2024: Incorporates licensing, permissions, and coastal planning to enhance operations.

Sagarmala Program: Aligns with initiatives to promote coastal shipping through dedicated berths and improved connectivity.

TINFT Infrastructure Development: Calls for simultaneous infrastructure and regulatory improvements.

Bipartisan Support: Advocates for initiatives that transcend party politics for effective implementation.

Investment and Safety: Aims to attract investment, enhance safety, combat pollution, and support seafarer welfare.

Gullocking Potential: Designed to unlock the full potential of India's maritime sector.

# The torchbearers





People sing during the Los Escobazos (the brooms) festival in Jarandilla de la Vera, Caceres, Spain on Saturday night. The festival, celebrated on the eve of a Catholic feast, is believed to have originated with shepherds using blazing brooms to light their way. REUTERS

# **Topic** → **Los Escobazos**:



• This festival is based on an old pastoral tradition, when shepherds returned from the mountain to the village to celebrate the Immaculate Conception procession, lighting up their path with blazing brooms which they would put out by beating and spiritedly hitting each other, when they got to Jarandilla.

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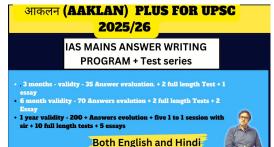
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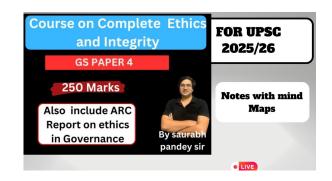
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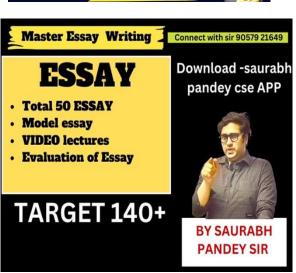












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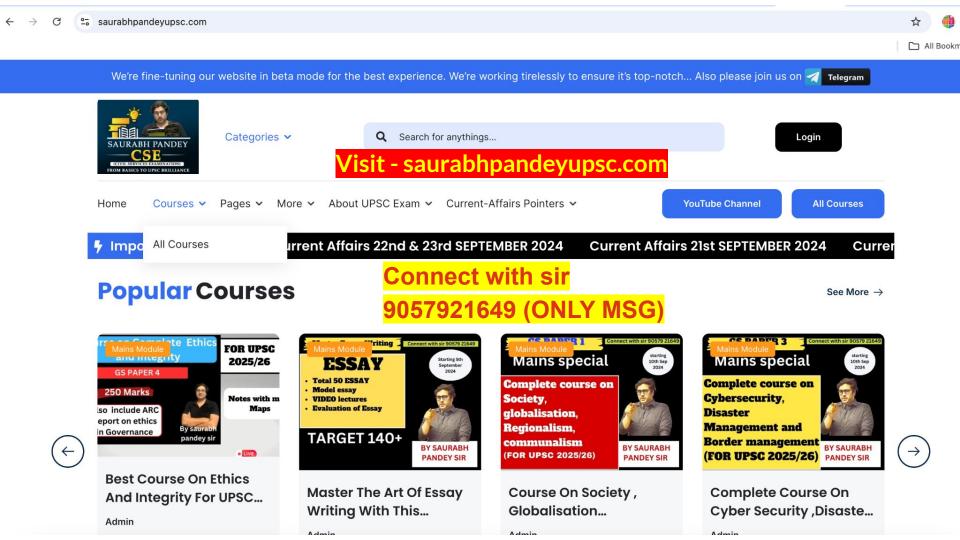
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Week -4 - Ethics and integrity

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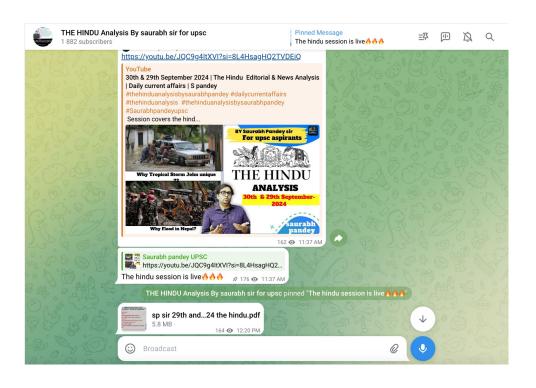
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