GAGAN

THE DESERVING INDIA

WEEKLY CURRENT AFFAIRS

07 SEPT TO 13 SEPT

07-09-2024

QUAD-SECURITY DIALOGUE SEMISSION

Context- Quad summit to be held on 21 september in USA.
About Quad:-
Members:- India,Australia,Usa,Japan
Objective:-Free,open and prosperous Indo-Pacific region.
Idea first mooted by:-Japanese prime minister Shinzo Abe in 2007.
2017:-India,Australia,Us and japan formed quadrilateral coalition.

AGENDA TOPICS:-

1.Security and cooperation:- This Group focus areas include maritime security,cover security,and counter terrorism.
2.Technological and health security:- Discussions on critical and emerging technologies, health security.
3.Environmental and Humanitarian issue:- Climate related issue, humanitarian and disaster relief done by Quad.
4.Economic and Infrastructure development:- Infrastructure, Connectivity, addressing debt crises through sustainable financing practices.

ISSUES RELATED TO QUAD

1.Lacks definitive Structure:- It is not structured like a typical multilateral organisation and it had not a permanent decision making body or secretariat.
2.China concern:- China has strong economic relation with Australia which is problematic for india.
3.Imbalanced Cooperation:- In present QUAD member has no same level of financial resources,military capabilities etc.
4.Lacks coherent actions:- As we can see withdrawal of army by USA from afghanistan it undercut Quad commitment to fight against terrorism.

WAY FORWARD

1.Strategic Cooperation:-Four countries should take decision and deepen their military cooperation and time to time join military exercises.
2.Geography:-To tackle indo pacific Region and China the Quad countries should make combination can maintain a more beneficial multipolar order.
3.Technology:-Quad countries should help each other with the help of technology in economic and military field etc.
4.Enhancing joint capabilities :-Quad countries should create atmosphere of capabilities in different sector in political,economical,social,technology and military sector. Smart city mission

Context:-90% of projects under smart cities mission completed:Urban affairs ministry.

COMPONENTS OF SMART CITY

1.Society:-Society should be creative and trainning based inclusion of all classes and groups.
2.Quality of life:-In smart city quality of life should be increase with better education,health,employment etc.
3.Environment:-Sustainable developent of resources and sustainaible urbanize development and resource management.
4.Government:-Government should be open data where administrative services should be online mode.
5.Economy:-Enterprise and innovation culture should be develope and enhance productivity and local governance.
6.Mobility: Enhance infrastructure and technology and develope efficient transport and multimodal mobility.

FUNDAMENTAL PRINCIPLE OF SMART CITIES

1.Community at the core
2.More from less 3.Cooperative and competitive federalism
4.Integration,innovation,sustainaibility
5.Technology as a means
6.Convergence

08-09-2024

INDIA DESERVES UNITED NATION

SECURITY COUNCIL PERMANENT SEAT FUND

About united nation

It is a intergovernmental body,it was established with the purpose of international cooperation and peace.

Objective of the United Nation

1.Be friendly relationship among nations which create a unite world.

2.Promote respect and fundamental freedom of countries.

3.Maintain humintarian and socio economic relationship between nations.

4.Harmonizing relationship between nations.

About united nation security council:-

It is established after second world war in 1945 under under UN charter.

It's headquarter at New York.

Members:-

The council has 15 members the five Permanent member and ten nonpermanent members.

Voting Powers:-

Each member has one vote and Veto power vested on p5 Countries.

Issues with UNSC

1.An underpresentation Organisation:-

There are absence of the UNSC of the many continent of the countries like India,Germany,Brazil and South africa.

2.Failure of UNSC:-

United nation security council got failure in many cases like control on Russia-Ukraine war etc.

3.Power Division among p5:-

There are many conflict between P5 countries and they are deeply polarised among each other and they all also made different war group of countries and organisation.

4.Absence of any records of meetings

UN rules has no records and text kept of its meeting to discuss,amend or object.

Way Forward

1.Imbalance of power among P5 countries.

2.It is needed to reform in united nation security Council permanent seat.

3.It should be equall power distribution among different countries.

4.It is necessary to create a concern based Group of united nations which is not polarised group.

AgriSURE FUND

It was announced in the 2022-23 Budget.

It was established as a 750 crore Alternative investment fund,Offering both equity and debt support.

It is contributed by NABARD and the Ministry of agriculture.

NABVENTURES Ltd.,is a subsidiary of NABARD is the investment manager to the fund.

Focus Areas

1.Promoting innovation in agriculture field.

2.Develope farm produce of value chain.

3.Create and develope employment.

4.Support Farmers produce organizations.

5.Encouraging startup in this filed.

6.Provide rental Service of farmers.

Significance

1.Information Technology will boost Agricultural labour productivity.

2.It provide food at affordable prices to tackle down inflation.

3.It also Increase income and profits for small and marginal farmers,who constitute 85% of the farming population.

4.It will also increase investment in agriculture field.

09-09-2024

REGARDING UNUSUAL CYCLONE IN THE ARABIAN SEA

A significant portion of the moisture needed to produce the about 200 lakh crore buckets of water during the summer monsoon comes from the north Indian Ocean. That suggests that the Arabian Sea and the Bay of Bengal evaporate a great deal, which necessitates that these waters be warm enough for evaporation to occur. Tropical seas that are warm also frequently serve as cyclone hotspots. Despite this, in terms of cyclone activity, the north Indian Ocean is the least active oceanic region globally. This region is unique in terms of cyclone seasons, numbers, and how the ocean and cyclones react to global warming due to a mix of elements that promote and inhibit cyclogenesis.

What makes the Indian Ocean distinct?

Many people are interested in the Indian Ocean because of its monsoonal circulation and the striking seasonal wind reversals that occur to the north of the equator. Its "oceanic tunnels," which link it to the Pacific and Southern oceans, are another distinctive feature. Every year, the Southern Ocean tunnel brings in colder waters below around 1 km, while the Pacific tunnel brings in a sizable amount of warm water in the upper 500 m.

As the Sun moves from the southern to the northern hemisphere during the pre-monsoon season, the Arabian Sea warms quickly. While the Arabian Sea is cooler than the Bay of Bengal, the latter warms more quickly and starts to experience rainfall and air convection. Over the Bay of Bengal, the trough that finally precedes the start of the monsoon over Kerala moves in about the middle of May. For India, the northeast monsoon season, or post-monsoon season, brings heavy rainfall to a number of States.

The year-round cyclogenesis over the north Indian Ocean is influenced by all of these wind patterns and sea surface temperatures, which maintain the pronounced cyclogenesis differences between the Arabian Sea and the Bay of Bengal.

Is there a role for climate change as well?

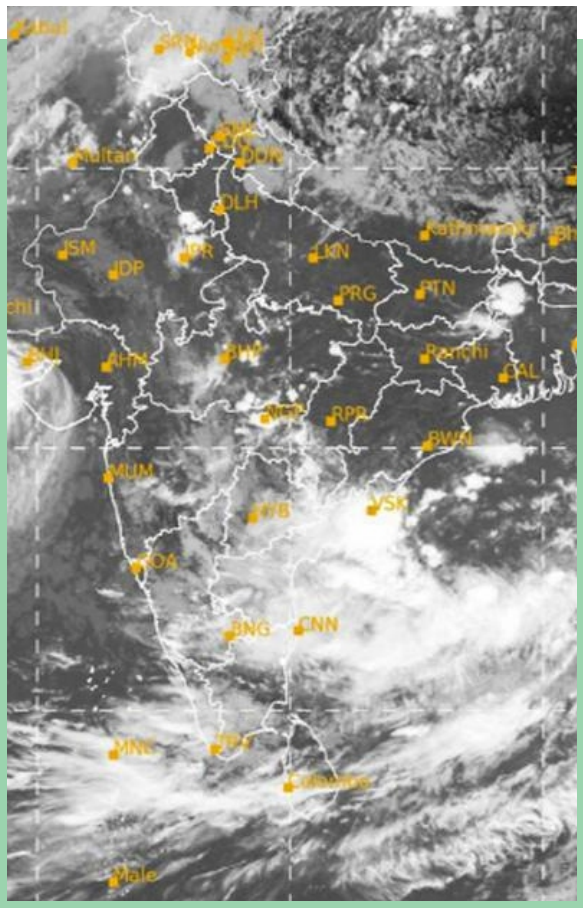
The Indian Ocean is becoming even more unique due to climate change. The Pacific Ocean is currently bringing in more heat, while the Southern Ocean is likewise bringing in warmer water. These inputs, along with variations in humidity and winds in the atmosphere, are causing the Indian Ocean to warm quickly. The monsoon and the north Indian Ocean are currently reacting to associated drivers of climate change that originate from tropical oceans and pole-to-pole effects.

According to recent reports, the Pacific Ocean's ability to absorb heat and the north Atlantic Ocean's ability for heavy seas to sink are both being impacted by the ocean's rapid warming. In the context of climate change, the Indian Ocean is essentially serving as a clearinghouse for ocean warming. Over the Indian Ocean, cyclogenesis, cyclone numbers, and their reactions to climate change are all influenced by these peculiarities unique to individual regions.

DO CYCLONES OFTEN OCCUR?

Strong southwesterly winds, often known as the "low-level jet," cause a significant amount of cold subsurface water to evaporate and combine with surface waters during the monsoon. Because of this, the Arabian Sea gets noticeably colder in the pre-monsoon season. During the monsoon, the intense convective activity over the Bay of Bengal creates a lot of low-pressure, or cyclonic, systems, although they hardly ever intensify into cyclones.

This is due to the fact that from the surface to the middle atmosphere, the powerful monsoon winds differ in strength and direction. This variation is known as vertical shear, and it has the tendency to drain any potential cyclone's energy.



As a result, throughout the north Indian Ocean, the dominating cyclone season is distinctively divided into the pre- and post-monsoon seasons. Every other cyclogenesis region experiences a solitary cyclone season annually.

The warm ocean, high heat content, and atmospheric convection favor cyclogenesis across the north Indian Ocean, which is the primary effect of the monsoonal circulation. As a result, cyclones are created in the pre- and post-monsoon seasons. Nonetheless, the Arabian Sea is comparatively less prone to cyclogenesis and experiences significantly less convective activity during the pre-monsoon. The Arabian Sea cools after the northeast monsoon due to dry continental air and the monsoon.

Thus, in both seasons, the number of cyclones over the Arabian Sea is approximately half that over the Bay of Bengal.

Consequently, the Arabian Sea is essentially a cyclone desert due to its colder temperatures, increased wind shear, and comparatively limited convective activity.

The number of cyclones appeared to be on the rise starting in 2010, but the Arabian Sea has been unusually calm in recent years.

Asna

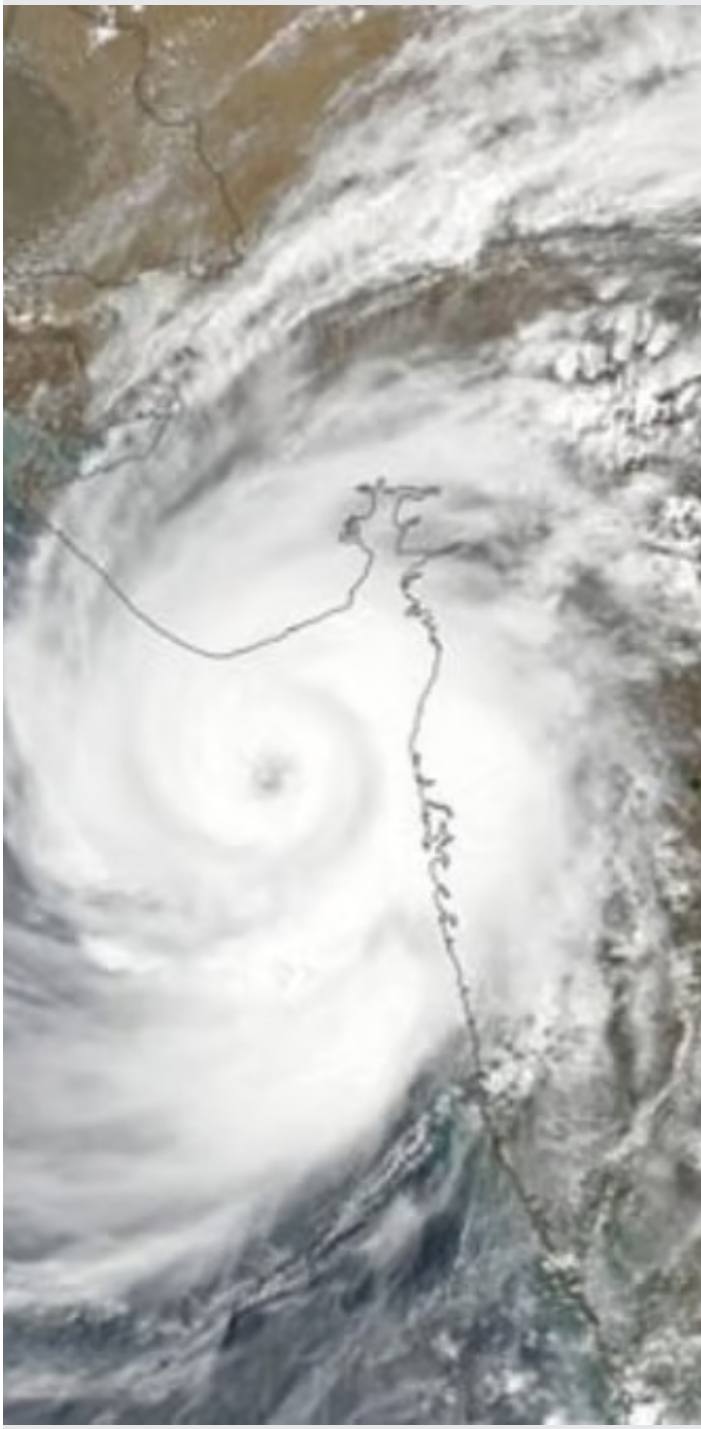
Recently, there was a lot of hype about a rare August cyclone known as "Asna," which formed after a strong land-born depression transitioned onto the warm Arabian Sea. Since 1981, this is the first storm to form in the north Indian Ocean in August. The cyclone that originated from the depression was remarkable for its strong landward expansion. Approximately 60% of the seasonal rainfall is brought about by low-pressure systems, which are usually born over the Bay of Bengal and move through the core monsoon zone.

As they move throughout India, these ocean-born depressions may be able to absorb soil moisture from earlier rainfall. Although these low-pressure systems have been trapped in a corridor for more than a century, there is some evidence that they are now influencing intense rainfall episodes. Due to excessive rainfall from the start of the season, the low-pressure system that brought floods to western India grew unusually. It was large enough to begin splashing into the warm northern Arabian Sea as it got closer to the western tip of the continent. The energy needed for convection, as well as for it to hold onto and even strengthen, came from the ocean.

After finishing its passage to the ocean, it developed into a typical cyclone that was strikingly rare for a land-born storm. It has already been observed that the warming over the Arabian Sea is connected to the low-level jet's northward movement, which is caused by the rapid warming over West Asia. In addition to inflicting damage to properties and crops, Cyclonic Storm Asna did result in around 50 fatalities. Eventually, dry desert air was entrained into the circulation and it dispersed over the ocean.

You'll always be astonished if you expect nothing, as the English author Daniel Defoe once stated. The warm 2023–2024 that was caused by El Niño and global warming, along with possible underwater volcanic eruptions, has brought about a number of unexpected extreme events worldwide. Unusual has also been the progression of the monsoon, particularly because the powerful La Niña that was predicted hasn't materialized yet. There was a curious combination of rainy and dry parts throughout the country's north, and a wet peninsular India, making the rainfall distribution as erratic as ever.

The amplification of a low-pressure system over land is exceptional, but the low itself is not. Another surprise moment is when it darts from the land onto the ocean. It caught us off guard, and we were understandably taken aback.



INDIA'S MONSOON

PATTERN CAN CHANGE, ARCTIC SEA ICE LEVEL CHANGES!! KNOW HOW?

REFERENCE

India's south-eastern region has been hit by incessant rains, which have led to floods, deaths and large-scale displacement. The Indian Meteorological Department has also issued a warning of more heavy rain in other parts of the country.

Why in discussion?

Heavy rains have killed at least 17 people in Andhra Pradesh and thousands have been left homeless in Telangana. The unpredictable and erratic nature of the Indian monsoon has been blamed for these extreme weather events due to climate change and other global factors.

Background

The Indian summer monsoon, which usually brings relief and prosperity, has become increasingly unpredictable in recent years. Rainfall, once a reliable source of water, is now swinging between droughts and floods, creating environmental and social crises.

WHY DO MONSOON PATTERNS CHANGE?

Monsoon patterns are influenced by many factors, including surface temperature, pressure gradients, air currents and global atmospheric systems such as circum-global teleconnection (CGT). Recent studies suggest that changes in Arctic sea ice also play an important role in changing monsoon behavior.

CHANGING PATTERNS OF INDIAN MONSOON

The Indian summer monsoon system now faces additional complications, driven by the temperature difference between land and ocean. Atmospheric waves such as ocean temperature and Rossby waves interact with global weather systems, causing changes in the intensity and timing of monsoons, leading to greater weather variability.

A combination of climate change, reduction in Arctic sea ice and complex atmospheric interactions is changing the pattern of the Indian monsoon. These changes result in both droughts and floods, which affect different parts of India in different ways.

What will be the effect of this cyclone named Asana?

As it is not a cyclone, strong winds, heavy rains and floods are expected in the coastal areas of India. This may add to the challenges of the current climate due to additional displacement, destruction of property and loss of life, which may put further pressure on resources in the affected areas.

CONCLUSION

Climate change, changing weather patterns and declining Arctic sea ice are causing significant changes in the Indian monsoon. These changes bring increased risks of extreme weather events, including floods, droughts and cyclones, which will have far-reaching consequences for the environment and human society.

WAY FORWARD

To mitigate the effects of these changing weather patterns, India needs to invest in climate resilience, strengthen disaster preparedness and continue research on climate dynamics. Policy makers should focus on sustainable development, water management and adaptive agricultural practices to deal with the increasing unpredictability of the monsoon.

10-09-2024

KNOW, WHY IS HELIUM NECESSARY FOR ROCKETS?

Context

NASA and Boeing have been dealing with recurring issues related to helium leaks in space missions. This has affected operations of Boeing's Starliner spacecraft and delayed SpaceX's Polaris Dawn mission.

Helium, a gas needed to pressurize rocket fuel tanks, has proven both valuable and problematic due to frequent leak incidents.

WHY IN THE NEWS?

Two NASA astronauts aboard Boeing's Starliner will remain on the International Space Station (ISS) for several months due to propulsion system problems, including a helium leak. Meanwhile, SpaceX's Polaris Dawn mission has been delayed due to helium-related issues on ground equipment.

BACKGROUND

Helium leaks are not a new problem in space exploration. Similar problems have occurred in previous missions such as ISRO's Chandrayaan 2 and ESA's Ariane 5.

Although helium is widely used in space missions, its tendency to leak from small gaps has become a growing concern across the industry.

WHY ONLY HELIUM AS FUEL IN ROCKETS?

Helium is not used directly as a fuel for rockets but plays a vital role in pressurizing rocket fuel tanks and ensuring the smooth flow of fuel.

It is ideal for space missions because it is inert, meaning it does not react with other substances, making it a safe choice in the highly volatile environment of rocket propulsion systems.

WHY IS HELIUM THE PREFERRED FUEL?

While other gasses such as argon and nitrogen have been used in rocket systems, helium remains the preferred choice due to its unique properties.

Helium's low boiling point allows it to remain gaseous in extremely cold environments, which is important for cryogenic fuels often used in space missions.

IMPORTANCE OF HELIUM

Helium is primarily used to pressurize rocket fuel tanks and cooling systems. As fuel is consumed during flight, helium fills the empty space in the tanks, maintaining a constant pressure.
This ensures that the rocket's engine receives an uninterrupted flow of fuel. Its non-reactive nature also makes it safe for use in such high-risk operations.

BENEFITS OF HELIUM

The major advantages of helium include its inertness, which prevents dangerous chemical reactions and its ability to remain gaseous at very low temperatures. Its low density also makes it lighter, reducing the overall weight on the rocket, which is important in optimizing fuel efficiency.

Helium Leaks - A Growing Problem

One of the major disadvantages of using helium is that it tends to escape through small gaps or seals, causing leaks.

These leaks, though often detected early, can disrupt mission timelines and raise safety concerns. Such problems were seen in NASA's Starliner mission, in which the leak was detected both before and after the spacecraft's launch.

HELIUM LEAK DISPOSAL

Helium leaks can be resolved by adopting the following measures. Such as:-

- Addressing helium leaks requires improving valve designs and fittings in the rocket system.
- Engineers have suggested tighter seals and more rigorous testing to reduce the likelihood of leaks.

- Some missions have explored alternative pressurization systems but these have faced their own challenges.

CONCLUSION

Helium remains a critical element in space missions due to its unique properties. However, the growing issue of helium leaks has prompted the space industry to reconsider the design and reliability of their systems. These recurring problems highlight the need for innovation and strict quality control in space technology.

THE WAY FORWARD

The space industry should focus on advancing valve technology and exploring alternative pressurization systems to minimize the impact of helium leaks.

While helium will likely remain central to rocket technology, improvements in sealing mechanisms and leak detection systems are essential to ensure mission success and safety.

ARE TURKISH COMPANIES FACING CLOSURES AMID ECONOMIC DOWNTURN?

CONTEXT

Turkey's garment industry, once a major player in global fashion supply chains, is now facing a severe economic downturn.

Rising costs, a devalued lira and policy changes aimed at controlling inflation have put businesses under stress, leading to mass closures and layoffs.

WHY IN THE NEWS?

The challenges facing Turkey's garment industry are emblematic of the broader economic problems gripping the country. Many businesses, including crucial sectors such as textiles, are struggling to stay afloat amid rising inflation, rising energy costs and dwindling export orders. A wave of bankruptcies and factory closures across the country highlights the dire economic situation.

BACKGROUND

For several years, Turkey's economic policy, led by President Tayyip Erdogan, focused on monetary easing to boost growth. However, this led to uncontrollable inflation and a series of currency depreciations.

In response, the central bank has been implementing aggressive policy measures, including sharp interest rate hikes, to rein in inflation. These efforts have had a mixed effect, reducing inflation but making loans more expensive and leaving many businesses in financial trouble.

WHAT IS AN ECONOMIC RECESSION?

An economic recession occurs when a country's economy contracts for a prolonged period of time, typically resulting in a drop in GDP, a rise in unemployment, and a reduction in industrial production.

This often leads to a decrease in consumer spending, a decline in business investment, and widespread financial instability. Turkey is on the verge of recession, with inflation and policy changes hampering business growth and leading to a sharp increase in bankruptcies.

RISING COSTS AND DECLINING COMPETITION

The garment industry, a major export sector for Turkey, has been particularly hit hard. Businesses like Dogan Duman's factory, which supplies global brands like Zara, are facing declining orders due to a lack of competition.

Inflation that reached above 75% earlier this year, along with a surge in energy prices and a weakening lira, have made it difficult for Turkish businesses to compete with manufacturers from countries like Vietnam and Bangladesh.

TURKEY'S INDUSTRIES AND THE GLOOMY OUTLOOK

With nearly 15,000 businesses expected to close in the first seven months of 2024, the prospects for Turkey's industries appear bleak.

Factory closures, job losses and rising production costs have pushed many companies toward bankruptcy. Textiles and construction firms are particularly vulnerable, with many seeking court protection to delay loan payments and continue operating.

CONCLUSION

Turkey's aggressive efforts to control inflation through interest rate hikes have cooled the economy but come at a significant cost to businesses.

The country's garment industry, once a vital sector, is now struggling with declining competition, rising costs and declining orders. Many companies are on the verge of collapse, and economic uncertainty has cast a shadow over the future of Turkey's industries.

THE WAY FORWARD

Turkey may need to take a more balanced approach to economic policy to stabilize the economy and protect key industries.

This could include measures to ease the burden on businesses, such as targeted financial support, tax breaks or incentives to boost exports. Additionally, the government could focus on increasing the competitiveness of domestic industries by reducing energy costs and investing in workforce development.

DEFAMATION CASE

Context

Congress MP Shashi Tharoor recently approached the Supreme Court seeking reversal of the Delhi High Court's decision that refused to quash defamation proceedings against him.

The case stems from his remarks about Prime Minister Narendra Modi, in which he compared him to a "scorpion sitting on a Shivling".

Why in the news?

Tharoor's legal team has urged the Supreme Court for an urgent hearing on the matter. The plea was mentioned before Chief Justice DY Chandrachud when the bench was concluding its work for the day.

Background

The defamation case against Tharoor was filed following his controversial remarks during an event in 2018, in which he used the metaphor of a "scorpion sitting on a Shivling" to describe Modi.

This comment was considered offensive by some, which led to legal action under defamation laws.

What is defamation?

Defamation is the act of harming someone's reputation through false statements, whether written (slander) or oral (slander). In India, defamation can be both a civil and criminal offence and is dealt with under sections 499 and 500 of the Indian Penal Code (IPC).

WHEN IS A DEFAMATION CASE FILED?

A defamation case is filed when a person believes that his or her reputation has been harmed by false statements made by another party.

In criminal cases, this involves proving that there was an intent to cause harm, while in civil cases, the plaintiff seeks monetary compensation for the damages suffered.

- **FACTORS CONSIDERED WHILE DECIDING A DEFAMATION CASE -**
- Judges consider several factors before passing a judgment on defamation cases. Such as:-
- The truthfulness of the statement
- The intention and whether the statement was made in good faith
- Public interest and freedom of expression are also weighed, especially when political figures or public officials are involved
- **What is the procedure for pleading a defamation case?**
- In criminal defamation cases, the complainant files a petition in the magistrate's court and the accused is summoned.
- Evidence is presented and witnesses may be called.
- The defence may argue that the statement was true, made in the public interest or was not intended to cause harm.
- **When can defamation proceedings be dismissed?**

A defamation case can be dismissed if the court finds that the statements made were true or fall within the category of fair comment, made in the public interest without malicious intent.

It can also be dismissed if there is not enough evidence to pursue the case.

- **CONCLUSION**

Tharoor's petition draws attention to the ongoing debate about defamation laws in India, particularly when they involve public figures. The Supreme Court's decision on this matter could set an important precedent.

WAY FORWARD

This case highlights the need for clear guidelines on defamation, particularly in relation to political speech and public interest. In a democracy, a balance must be struck between protecting reputation and ensuring freedom of expression.

STUDY REVEALS UNEVEN IMPACT OF RURAL ELECTRIFICATION

11-09-2024

- **Context**

Launched in 2005, the Rajiv Gandhi Grameen Vidyut Yojana aimed to bring electricity to about 400,000 villages in India. However, recent analysis has shown that the benefits of electrification have been distributed unevenly, favouring larger, more populous villages over smaller ones.

Why in the news?

A study conducted by the University of Chicago and the University of Maryland has highlighted inequalities in access to electricity between smaller and larger villages. The study shows that smaller villages experienced limited economic benefits, while larger villages experienced substantial improvements in per capita income.

BACKGROUND

The initiative, named after former Prime Minister Rajiv Gandhi, was aimed at improving access to electricity in rural India. While significant progress has been made, the distribution of benefits has been uneven, with larger villages benefiting more from electrification.

BENEFITS OF ELECTRICITY AVAILABILITY IN RURAL AREAS

Access to electricity has brought many notable benefits to rural areas. Such as:-

- IMPROVED QUALITY OF LIFE
- INCREASED PRODUCTIVITY
- ECONOMIC GROWTH
- PROMOTES ACCESS TO EDUCATION, HEALTHCARE AND COMMUNICATION SERVICES
- ALSO AIDS IN INDUSTRIAL AND AGRICULTURAL ACTIVITIES

THE JOURNEY OF ELECTRICITY IN RURAL AREAS OF INDIA

The journey of rural electrification in India spanned decades, progressing slowly. In 2018, Prime Minister Narendra Modi declared all Indian villages electrified, but the goal of providing 24/7 electricity is still on.

CHALLENGES IN ELECTRICITY AVAILABILITY

Providing electricity in rural areas has been a special achievement, which has faced many challenges. These are as follows -

- High cost of infrastructure
- Geographic barriers
- Maintaining a consistent power supply in remote areas
- Connecting small, isolated villages to the grid

IMPROVEMENTS IN RURAL AREAS FOLLOWING ELECTRICITY AVAILABILITY

Significant economic improvements have occurred in larger villages, especially those with more than 2,000 inhabitants. Full electrification in these areas led to an increase in per capita expenditure, doubling the income of some residents. However, smaller villages have not seen the same level of growth.

IMPORTANCE OF ELECTRICITY IN RURAL AREAS

Electricity plays a vital role in improving rural livelihoods by supporting agricultural productivity, small businesses, and social services. It can reduce poverty, improve education outcomes, and enhance health services.

EFFECT OF ELECTRIFICATION ON ECONOMIC GROWTH

Although access to electricity contributes to national GDP growth, it does not always improve living standards in smaller communities. Larger villages experienced clear economic growth, but the benefits were much less for smaller, remote villages.

RETURN ON INVESTMENT VARIES WITH VILLAGE SIZE

Small villages with 300 people had a "zero return" from electrification after 20 years. In contrast, villages with 1,000 residents had a 13% return and villages with 2,000 or more had a 33% return on investment, making electrification far more cost-effective in larger communities.

CURRENT STATUS OF ELECTRIFICATION

In 2018, all villages in India were declared electrified. However, the commitment to provide round-the-clock electricity remains unfulfilled. The study relied on 2011 census data, as no new census has been conducted since then.

CONCLUSION

The study finds that electrification efforts have yielded uneven results, with larger villages benefiting more. Small, remote villages have struggled to reap adequate economic benefits from electrification.

WAY FORWARD

To bridge this gap, focus should be on alternative energy solutions such as solar home systems and mini-grids for small villages. Extending the grid to larger villages will remain essential, but innovative approaches for remote areas will be crucial for balanced rural development.

Ovarian cancer: Know its causes, symptoms and complete information including testing methods

REFERENCE

Ovarian cancer is the deadliest gynecological cancer, often referred to as the "silent killer" because of its vague symptoms that lead to late diagnosis and poor prognosis. It is one of the top three cancers affecting women in India.

WHY IN NEWS?

Ovarian Cancer Awareness Month, observed in September, focuses on raising awareness about lesser-known aspects of the disease, including its symptoms, risk factors, and the importance of early detection.

BACKGROUND

In 2022, India reported 47,333 new ovarian cancer cases and 32,978 deaths, underscoring the severity of the disease. Early detection, raising awareness about genetic risk and lifestyle factors can have a significant impact on prevention and treatment efforts.

SUBTLE AND EASILY OVERLOOKED SYMPTOMS

Ovarian cancer presents with symptoms such as bloating, pelvic pain, loss of appetite, and frequent urination. These symptoms are often misinterpreted as common illnesses, leading to delayed diagnosis. Other symptoms include indigestion, constipation, fatigue, and postmenopausal bleeding.

MAIN TYPES OF OVARIAN CANCER

Ovarian cancer is classified into 2 main subtypes:

- Type I tumors: less common, detected early, and have a better prognosis.
- Type II tumors: more common, aggressive, and usually diagnosed at advanced stages, leading to a higher mortality rate.

SURVIVAL RATES AND TREATMENT

Survival rates depend on early detection and treatment. About 20% of patients with advanced ovarian cancer who receive optimal surgery and chemotherapy can be disease-free for up to 10 years. However, late diagnosis often reduces the chances of long-term survival.

INDIA'S STATISTICS ARE SHOCKING

India's 2022 data shows a high incidence of ovarian cancer, with over 47,000 new cases and nearly 33,000 deaths. This highlights the urgent need for better awareness, prevention, and treatment options.

LACK OF EFFECTIVE SCREENING TOOLS

Unlike breast or cervical cancer, ovarian cancer lacks reliable screening tests.

The CA125 blood test, while useful for monitoring cancer after diagnosis, is not suitable for routine screening due to its low specificity, leading to false positive results and unnecessary interventions.

GENETIC RISK FACTORS

Hereditary ovarian cancer associated with mutations in the BRCA1 and BRCA2 genes accounts for 65-85% of cases. Women with these mutations have a significantly higher risk of developing ovarian cancer, with a 50% risk for BRCA1 and a 15% risk for BRCA2 carriers.

LIFESTYLE AND ENVIRONMENTAL FACTORS

Certain lifestyle factors, such as the use of talcum powder in the genital area and chemical hair products, may increase the risk of ovarian cancer. Although research is ongoing, there is concern about the long-term effects of these products on cancer risk. Hormone replacement therapy (HRT) is also associated with a higher risk of ovarian cancer, even if it is used for less than five years.

IMPORTANCE OF GENETIC COUNSELING

Genetic counseling is important for women who have a family history of ovarian or breast cancer. It helps identify those at risk and provides personalized preventive measures, such as clinical monitoring and prophylactic surgery, to reduce the chance of developing ovarian cancer.

EMPOWERMENT THROUGH AWARENESS

Ovarian cancer is often detected too late due to its subtle symptoms.

Raising awareness, especially during Ovarian Cancer Awareness Month, can empower individuals to recognize the signs, consider genetic testing, and explore preventive options.

CONCLUSION

Ovarian cancer is a deadly and underdiagnosed disease. By understanding its symptoms, genetic links, and risk factors, patients and healthcare providers can work towards earlier detection and better outcomes.

WAY FORWARD

Increased awareness, regular medical counseling, genetic testing for high-risk individuals, and ongoing research on screening tools and treatment options will be key in reducing the impact of ovarian cancer in India and globally.

GERMANY SEEKS BETTER
DEFENCE TIES WITH INDIA WITH AN EYE ON

THE INDO-PACIFIC REGION

Context

In August, India hosted one of its largest multilateral air exercises Tarang Shakti (Phase I), which saw participation from various countries, including the German Luftwaffe. The exercise is a significant moment as it is the first time Germany has joined an aerial exercise in Indian airspace.

Why in the news?

The inclusion of the German Luftwaffe in Tarang Shakti reflects the growing trend of increased military cooperation between India and European countries. It also reflects Germany's growing interest in cementing its role in the Indo-Pacific region.

BACKGROUND

Germany has historically been a minor player in India's defense sector compared to Russia, the US and France. However, recent changes in global dynamics have led Germany to play a more significant role in India's defence market and regional security.

Tarang Shakti: Prelude to Pacific Skies 24

Tarang Shakti served as a prelude to Pacific Skies 24, a major air exercise involving France, Germany and Spain. The German Luftwaffe flew 1.3 million kilometers during the exercise, reflecting its commitment to strengthening military ties and reinforcing its strategic focus on the Indo-Pacific.

India's evolving defense partnerships

India's defense ties have traditionally been centered around Russia but recently the US and France have become major suppliers. Germany, despite being a major global arms supplier, has had limited involvement in India's defense sector until now.

Germany's late entry into India's defence market

Germany's engagement with India's defence sector is relatively recent compared to the US and France. Dr Adrian Hack of the Konrad Adenauer Foundation said Germany has been slow to address India's defence interests but is now stepping up its efforts.

DEFENCE COOPERATION: SUBMARINE PROJECT 75

In a significant development, ThyssenKrupp Marine Systems (TKMS) and Mazagon Dock Shipbuilders Limited (MDL) signed a Memorandum of Understanding in 2023 for the construction of submarines under Project 75 (India).

This collaboration is an important point of entry for Germany into India's high-tech defence sector.

TECHNOLOGY TRANSFER AND CHALLENGES

Technology transfer is crucial to India's defence partnership. Germany faces potential challenges in this area as advanced technology transfer requirements can complicate future cooperation. The success of Germany's participation may depend on how well it meets these requirements.

CONCERNS OVER CHINA'S INDO-PACIFIC STRATEGY

China's actions in the Indo-Pacific, including military expansion in the South China Sea, have raised regional security concerns. Germany has expressed strong political stances against China's aggressive policies, reflecting its broader strategic interests.

GERMANY'S STRATEGIC INTERESTS IN THE INDO-PACIFIC

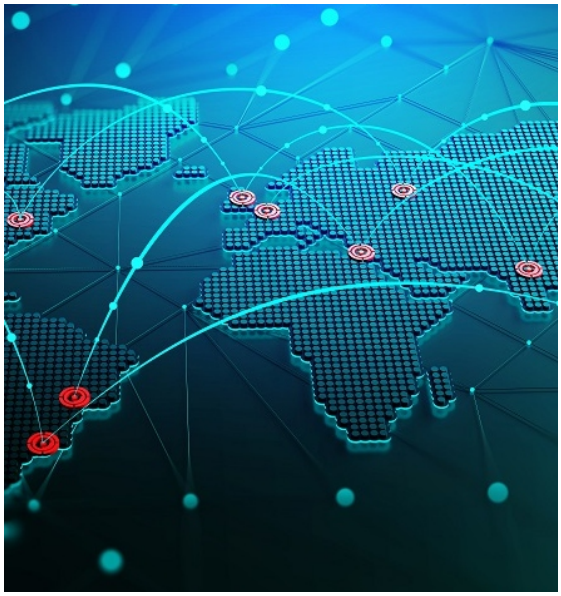
Germany's participation in Indo-Pacific exercises and its growing defense involvement reflect its strategic interest in maintaining free and secure shipping routes. This involvement is part of Germany's broader strategy to assert its role in regional security.

SHIFT IN EUROPE'S GEOPOLITICAL FOCUS

Ongoing geopolitical changes, particularly following the Russia-Ukraine conflict, are pushing Europe to establish its influence in the Indo-Pacific. As Europe's largest economy, Germany is positioning itself to become a key player in this crucial region.

SHOWING POWER IN THE INDO-PACIFIC

Germany's increased military presence and strategic initiatives in the Indo-Pacific are aimed at demonstrating power and influence. This approach reflects Germany's commitment to enhancing regional security and maintaining a role in international sea lanes.



CONCLUSION

Germany's participation in Wave Power and its growing defense cooperation with India reflect a significant shift in its strategic positioning. As Germany seeks to strengthen its role in the Indo-Pacific, it faces both opportunities and challenges in expanding its influence and defense partnerships.

THE WAY FORWARD

Enhancing its position in the Indo-Pacific will require Germany to address technology transfer challenges, deepen defense cooperation, and navigate the complex geopolitical landscape.

Continued engagement with India and other regional players will be critical to establishing a more prominent role in global security.

SICKLE CELL ANAEMIA CHALLENGES

12-09-2024

ABOUT SICKLE CELL ANAEMIA: -

In this complaint red blood cells distort the shape of Sickle and in this condition the cells die beforehand because of unhealthy development of cells.

In this condition many infections can develop like infections,pain and fatigue.

CHALLENGES

FEARS AROUND THE SAFE SUPPLY OF BLOOD:

In this condition when many infections and dead cells develop the fears develop around the safe supply of blood which creates an issue of safe supply of oxygen from one place to another.

- **Risk of infection:**-Risk of infection also develops which create other diseases in the body which create issues in the human body that was the main challenge of Sickle cell anaemia.
- **Lack of donors:-**In india lack of donors,because many people of our country were not aware about sickle cell anemia which creates issues related to spread of illness among other people.
- **illness:-** In this condition illness increases in very high density which creates many illnesses in our body which create many dead cells in the human body.

• SOLUTION

1.Treatment:- Government should try to control remuneration on treatment because it is costly and also provide subsidies in these medicines.

2.Research:-In our country research should be promoted in this field so we will be ATMA NIRBHAR in this field and medicine prices will also be controlled.

3.Aware:-Government should be aware about these diseases by local administrative administrative bodies and social media because many people are not aware about these diseases.

4.Donors:- Donors should be developed in our country because this is needed to develop many donors which are aware of donors which also help patients and hospitals.

Government initiative towards LGBTQi+

1. Inclusive Policy Development: The Department of Social Justice and Empowerment (DoSJE) is inviting public and stakeholder inputs to ensure the creation of inclusive policies for the LGBTQI+ community.

2. Supreme Court Judgment Implementation: Following the Supreme Court's 2023 ruling, a committee chaired by the Cabinet Secretary has been established to define and protect the entitlements of the LGBTQI+ community.

3. Ration Card Accessibility: Initiatives are underway to ensure that queer partners can access ration cards, a critical social service, recognizing their relationships in official documentation.

4. Joint Banking Rights: The government is enabling joint bank accounts for queer partners, along with partner nomination rights, ensuring financial security and inclusivity.

5. Healthcare Access: Significant healthcare measures are being implemented, including the banning of conversion therapy and the provision of access to sex reassignment surgeries.

6. Addressing Discrimination: The initiatives aim to tackle issues of discrimination within social services, banking, and healthcare, promoting equality for LGBTQI+ individuals.

7. Mental Health Focus: Special emphasis is placed on mental health, with measures to address discrimination, stigma, and mental well-being challenges faced by the LGBTQI+ community.

8. Dignity and Legal Protections: The government is taking steps to recognize queer relationships legally, ensuring that individuals in these relationships receive the same dignity and protections as others.

9. Consultative Approach: Public and stakeholder consultations are being emphasized to gather diverse perspectives, ensuring that the policies crafted are both effective and inclusive.

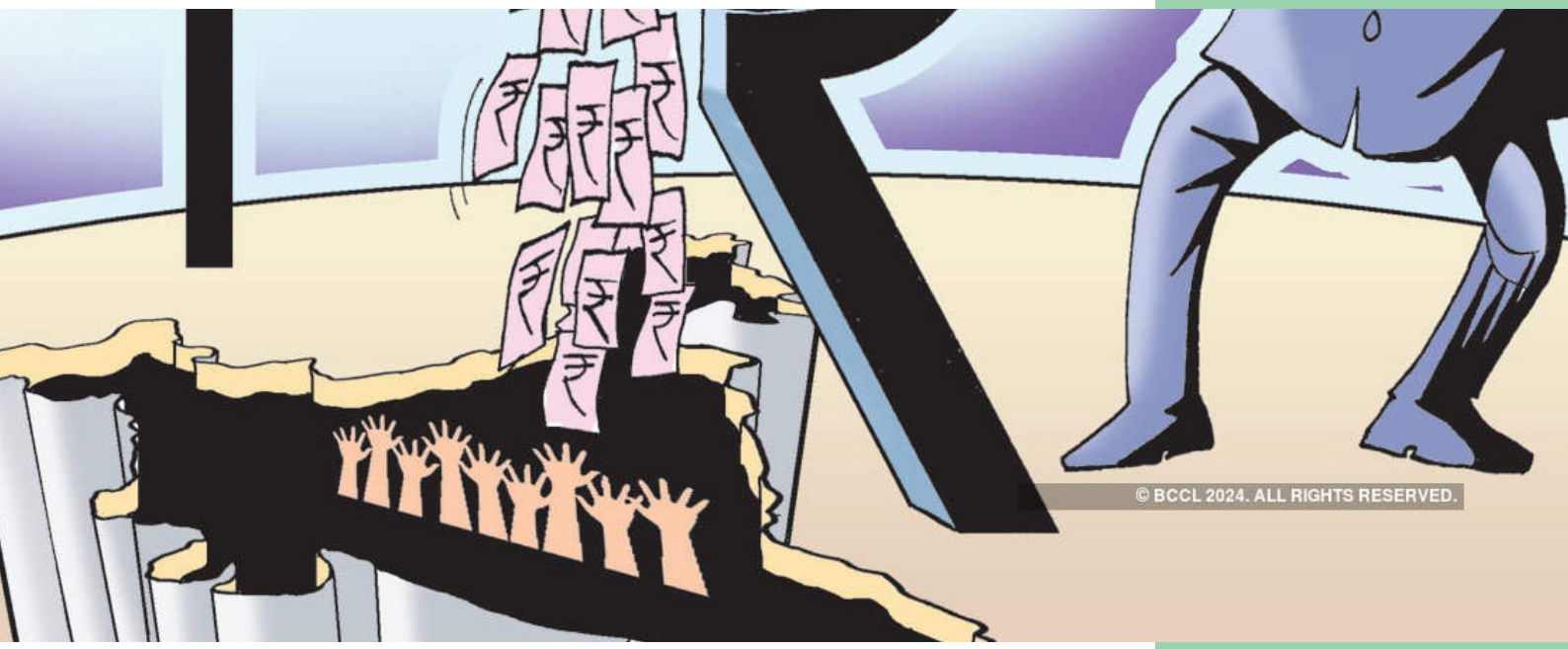
10. Core Values: The initiatives reflect core values such as inclusivity, non-discrimination, dignity, health rights, and a commitment to improving the mental well-being of the LGBTQI+ community

USE OF DRONE

1. Drone Definition: Unmanned Aerial Vehicles (UAVs) are remotely controlled devices used for combat, surveillance, and logistics.
2. Manipur Attack: The Chief Minister condemned recent drone bombings on civilians in Imphal West, labeling them terrorism.
3. Warfare Evolution: Drones are increasingly used in asymmetric warfare by both state and non-state actors.
4. State Actors: Countries like the USA, Israel, Ukraine, and Russia utilize drones for military operations.
5. Non-State Actors: Terrorists and insurgents, like ISIS and Mexican cartels, use drones for attacks and surveillance.
6. Indian Security: Cross-border and internal drone threats are rising, including smuggling and bomb attacks.
7. Drone Regulations: India's Drone Rules 2021 regulate drone use while boosting indigenous manufacturing.
8. Anti-Drone Systems: India is developing counter-drone systems and strengthening military response capabilities.
9. Domestic Development: Policies like the PLI scheme promote local drone production and restrict foreign imports.
Conclusion: Drone warfare empowers smaller actors; India must advance its technology to stay secure.

13-09-2024

UNIVERSAL BASIC INCOME



Context:-Key discussion on universal. basic income.

About:-It is a social welfare proposal where every adult citizen receives a set amount of money regularly.

BENEFIT:-

1.Financial security:- It provides financial security to all citizens who give minimum financial guarantee.

2.Poverty Alleviation:-It reduces income inequality for everyone and most for vulnerable and marginalized people.

3.Simplified welfare system:-It simplified the existing welfare system except various targeted social welfare programmes.

4.Economic stimulus:-UBI provides individuals with consumer spending and provides economic growth.

ISSUES:-

1.High Cost:-It is very expensive in nature which cuts spending and requires higher taxes.

2.Inflationary pressure:-If everyone receives more money it may increase the price of goods so it will create inflationary pressure by nature.

3.Dependency:- It makes people lazy and they will not want to work which creates dependency on society and it leads to reduced motivation for personal and professional growth.

WHAT CAN BE DONE:-

1.Direct benefit Transfer:- This scheme that accounts for the beneficiary instead through intermediaries provides financial assistance.

Example:- Schemes like PM Kisan,Pradhanmantri jan dhan yojana etc are fine Example.

2.Conditional cash transfer:-It is necessary to fulfill certain requirements of human capital and it provides long term outcomes for the poor.

3.Income Support scheme:- It provides cash or in kind assistance to widow women,child,old age person pension which provide financial assistance to them,which was a better alternative of UBI.

4.Guarantee scheme:- It provides some guarantee schemes like MGNREGA,which provide a better alternative to UBI.

SOLAR MAGNETIC FIELD RESEARCH

1. It found the sun's magnetic field across different atmospheric layers.

2. Data was collected from the Kodaikanal Tower Tunnel Telescope, focusing on an active sunspot region.

3. Many elements like hydrogen and calcium were used to study magnetic field stratification.

4. This research advances our understanding of solar magnetic phenomena.

5. The Kodaikanal telescope is a key instrument for solar observations.

6. The Evershed, describes gas flow across sunspots .

7. Magnetic fields connect solar atmosphere layers, transferring energy and mass.

8. "coronal heating problem," is a key solar mystery.

9. The coronal heating problem explains why the Sun's corona is hotter than inner layers.

10. The study sets the foundation for future solar magnetic field research.

DISASTER MANAGEMENT ACT -2005

Context: -Key amendment proposal of disaster Management act.

1. Background: Enacted after the 2004 tsunami, although the idea emerged after the 1998 Odisha super cyclone.

2. Key Features:

a. Creation of NDMA and State Disaster Management Authorities (SDMAs).

b. Establishment of the National Disaster Response Force (NDRF) and the National Institute of Disaster Management (NIDM).

3. Impact:

a. Institutional framework has saved thousands of lived

b. Provided effective relief, rescue, and rehabilitation services.

c. Increasing importance due to the rise in natural disasters exacerbated by climate change.

PROPOSED AMENDMENTS TO THE ACT

1. Urban Disaster Management Authorities:

a. New authorities for large metropolitan cities, headed by the municipal commissioner.

b. Aimed at coordinated approach for city-level disasters and to address special needs of large metropolitan areas that often span multiple districts.

2. State Disaster Response Force (SDRF):

a. Proposal: Mandatory establishment in every state.

b. Addressing varied capacities across states.

3. National Crisis Management Committee (NCMC):

Already operational, headed by the Cabinet Secretary, handling national emergencies.

Legal status for existing bodies.

Designated as a nodal body for serious national disasters.

4. Enhanced Role of NDMA:

a. Regular assessment of disaster risks, including emerging threats.

b. Expanded responsibilities including risk assessment.

c. Creation and maintenance of the national disaster database.

5. Disaster Compensation Guidelines:

a. Regular assessment of disaster risks, including emerging threats.

b. Creation and maintenance of a national disaster database covering assessments, fund allocation, and preparedness plans.

c. NDMA to recommend standards for relief, including compensation for loss of life, property, and livelihoods.

6. Clarification on Man-made Disasters:

a. Original Act included disasters from "man-made causes."

b. New Bill specifies that "man-made causes" exclude law-and-order situations, such as riots.

7. NDMA Leadership Structure:

Legitimization of current operational setup.

UNADDRESSED ISSUES IN THE BILL

1. Lack of Powers and Resources:

a. Calls for elevating NDMA to a government department or ministry for better coordination and influence.

b. Lack of vice-chairperson limits leadership and political influence.

2. Administrative Bottlenecks:

a. NDMA lacks financial and administrative autonomy.

b. Dependence on the Home Ministry for decisions is inefficient and slow.

3. Current Staffing Levels: Severely understaffed at the top level with only three members, down from six or seven.

4. State-Level Changes: Some amendments, particularly those affecting state structures, may face resistance.

a. Questions about funding for new institutions and expanded roles.

b. Potential strain on state resources.