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The Hindu Important News Articles & Editorial For UPSC CSE

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क्वाड विदेश मंत्रियों की बैठक में सदस्यों ने स्वतंत्र, खुले हिंद-प्रशांत, आसियान केन्द्रीयता और क्षेत्रीय सहयोग के प्रति अपनी प्रतिबद्धता की पुष्टि की।

Quad members vow to work vigorously towards a free, open, and stable Indo-Pacific

Press Trust of India
NEW DELHI

India and other Quad member-nations on Tuesday reaffirmed the grouping's steadfast commitment to work towards a free, open, and peaceful Indo-Pacific amid China's increasing military muscle-flexing in the region.

Foreign Ministers of the member nations of the grouping made the pledge in a joint statement commemorating the 20th anniversary of "Quad cooperation".

India, the U.S., Australia and Japan came together 20 years ago to extend assistance in response to the 2004 Indian Ocean earthquake and tsunami, and that coalition subsequently took the form of the Quad.

In the last few years, the Quad has rolled out a number of initiatives addressing some of the most pressing needs and challenges of the Indo-Pacific region, including in areas of maritime security, infrastructure and connectivity.

> We reaffirm our unwavering support for ASEAN's centrality and unity as well as mainstreaming and implementation of the ASEAN Outlook on the Indo-Pacific
>
> **QUAD FOREIGN MINISTERS**
> In a statement

India is scheduled to host the next Quad Summit likely in the second half of 2025.

The Foreign Ministers of the four nations said the Quad would work together in responding to the future needs of the Indo-Pacific.

"As four partners, we share a vision of a free and open Indo-Pacific that is peaceful, stable and prosperous, underpinned by effective regional institutions," the joint statement said.

The Quad Foreign Ministers also talked about the centrality of 10-nation grouping Association of Southeast Asian Nations (ASEAN) in the Indo-Pacific. "We reaffirm our unwavering support for ASEAN's centrality and unity as well as mainstreaming and implementation of the ASEAN Outlook on the Indo-Pacific," the Ministers said.

"We respect Pacific-led regional architecture, foremost the Pacific Islands Forum. We are also steadfast in our support for the Indian Ocean Rim Association, the region's premier organisation," they said.

चतुर्भुज सुरक्षा वार्ता (क्वाड):

- चतुर्भुज सुरक्षा वार्ता (क्वाड) में भारत, अमेरिका, ऑस्ट्रेलिया और जापान शामिल हैं।

- इसका गठन 2007 में हुआ था और इसका उद्देश्य 2004 के हिंद महासागर भूकंप और सुनामी के जवाब में मानवीय सहायता प्रदान करना था।
- क्वाड का मुख्य उद्देश्य एक स्वतंत्र, खुला और समावेशी हिंद-प्रशांत क्षेत्र को बढ़ावा देना है।
- सहयोग के प्रमुख क्षेत्रों में समुद्री सुरक्षा, बुनियादी ढांचे का विकास, कनेक्टिविटी और चीन के बढ़ते प्रभाव का मुकाबला करना शामिल है।
- क्वाड क्षेत्रीय सुरक्षा में दक्षिण पूर्व एशियाई देशों के संगठन (आसियान) और प्रशांत क्षेत्र में प्रशांत द्वीप समूह फोरम की केंद्रीयता पर जोर देता है।
- अगला क्वाड शिखर सम्मेलन 2025 की दूसरी छमाही में भारत द्वारा आयोजित किया जाना है।
- क्वाड हिंद महासागर रिम एसोसिएशन (IORA) जैसी क्षेत्रीय संस्थाओं का समर्थन करता है।

UPSC Mains PYQ 2018

प्रश्न: "चीन के साथ भारत के संबंधों के लिए प्रमुख चुनौतियाँ क्या हैं? इस संदर्भ में अमेरिका की भूमिका पर चर्चा करें।"

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भारत और नेपाल के बीच संयुक्त सैन्य अभ्यास सूर्य किरण का 18वां संस्करण नेपाल के शिवालिक पर्वतमाला में शुरू हुआ।

India-Nepal joint military exercise begins

Press Trust of India
KATHMANDU

The 18th edition of Exercise Surya Kiran, a joint military exercise between India and Nepal aimed at enhancing interoperability and fostering collaboration between the two nations' Armies, began on Tuesday.

The annual training event is conducted alternatively in the two countries.

The exercise, taking place at the Nepal Army Battle School, Saljhandi in the Shivalik ranges of Western Nepal, will be conducted till January 13.

It "aims to enhance interoperability, primarily in the fields of Counter Terrorism (CT) Operations," according to an X post by the Indian Embassy here.

"Exercise Surya Kiran signifies the strong bond of friendship, trust and common military linkages that exist between India and Nepal," it said. The Indian Army contingent, comprising 334 personnel, is being led by a Battalion from the 11th Gorkha Rifles, according to a press release by the Defence Ministry.

The exercise aims to enhance interoperability in jungle warfare, counter-terrorism operations in mountains and Humanitarian Assistance

सूर्य किरण अभ्यास:

- इस अभ्यास का उद्देश्य दोनों देशों की सेनाओं के बीच अंतर-संचालन क्षमता को बढ़ाना और सहयोग को बढ़ावा देना है।
- यह भारत और नेपाल में बारी-बारी से आयोजित होने वाला एक वार्षिक प्रशिक्षण कार्यक्रम है।
- यह अभ्यास पश्चिमी नेपाल के शिवालिक पर्वतमाला में नेपाल आर्मी बैटल स्कूल, सलझंडी में आयोजित किया जा रहा है।
- इसका मुख्य ध्यान आतंकवाद विरोधी (सीटी) अभियानों, जंगल युद्ध और पर्वतीय युद्ध पर है।
- इसमें मानवीय सहायता गतिविधियाँ भी शामिल हैं।
- सूर्य किरण अभ्यास भारत और नेपाल के बीच मित्रता और सैन्य सहयोग के बंधन को मजबूत करता है।

- IN-SPACe ने गैर-सरकारी संस्थाओं के लिए PSLV-C60/SpaDeX मिशन के POEM-4 मॉड्यूल पर 10 पेलोड के संचालन की सुविधा प्रदान की।

POEM-4 मॉड्यूल:

- POEM-4 का मतलब PSLV ऑर्बिटल एक्सपेरीमेंटल मॉड्यूल-4 है।
- यह अंतरिक्ष में वैज्ञानिक प्रयोग करने के लिए इस्तेमाल किया जाने वाला मॉड्यूल है।
- POEM-4 ISRO द्वारा लॉन्च किए गए PSLV-C60/SpaDeX मिशन का हिस्सा है।
- मॉड्यूल एक पुन: उपयोग किया गया PS4 चरण (PSLV रॉकेट का एक हिस्सा) है, जिसका उपयोग अंतरिक्ष में पेलोड तैनात करने के लिए किया जाता है।
- यह 55 डिग्री के झुकाव के साथ 350 किमी की ऊँचाई पर संचालित होता है।
- POEM-4 गैर-सरकारी संस्थाओं (NGE) जैसे स्टार्ट-अप, शैक्षणिक संस्थानों और अनुसंधान संगठनों को पूरे उपग्रहों को लॉन्च किए बिना अंतरिक्ष प्रौद्योगिकियों का परीक्षण करने की अनुमति देता है।
- यह इन संस्थाओं के लिए अंतरिक्ष गतिविधियों में शामिल होने के लिए प्रवेश बाधाओं को कम करने में मदद करता है।
- IN-SPACe द्वारा POEM-4 मॉड्यूल पर कुल 10 होस्टेड पेलोड सफलतापूर्वक स्थापित और संचालित किए गए।

IN-SPACe

- IN-SPACe का मतलब है भारतीय राष्ट्रीय अंतरिक्ष संवर्धन और प्राधिकरण केंद्र।
- यह अंतरिक्ष विभाग के तहत एक स्वायत्त एजेंसी है, जिसका उद्देश्य गैर-सरकारी संस्थाओं (NGE) द्वारा अंतरिक्ष गतिविधियों को बढ़ावा देना है।
- यह भारत की अंतरिक्ष गतिविधियों में निजी क्षेत्र की भागीदारी को बढ़ावा देता है।
- इसका उद्देश्य निजी संस्थाओं को भारतीय अंतरिक्ष अवसंरचना का उपयोग करने के लिए सुविधा प्रदान करना और प्रोत्साहित करना

10 payloads of ISRO's POEM-4 module deployed successfully

Hemanth C.S.
SRIHARIKOTA

The Indian National Space Promotion and Authorization Centre (IN-SPACe) on Tuesday said that it had facilitated the successful establishment and operationalisation of 10 hosted payloads from non-government entities (NGEs) on board the POEM-4 module of the PSLV-C60/SpaDeX mission.

The mission was launched by the Indian Space Research Organisation (ISRO) on Monday.

"The mission that launched today, carried out in-orbit scientific experiments at an altitude of 350 km with a 55-degree inclination, utilizing the spent PS4 stage repurposed as the PSLV Orbital Experimental Module (POEM-4)," said IN-SPACe, which is the autonomous nodal agency under Department of Space to promote NGE's undertake space activities.

Reducing entry barriers

"The PSLV Orbital Experiment Module is a practical solution deployed by ISRO that allows Indian start-ups, academic institutions, and research organizations to test their space technologies without the need to launch entire satellites. By making this platform accessible, we are reducing entry barriers and enabling a wider range of entities to contribute to the space sector," Pawan Goenka, Chairman, IN-SPACe, said.

ISRO's SPADEX Mission successfully lifted off from Sriharikota on Monday.

"At IN-SPACe, our role is to create opportunities for such collaborations and ensure that India's private sector can grow alongside advancements in space technology. Missions like these will be instrumental in capacity building by enabling NGEs to get their payloads space qualified, thus augmenting their future satellite launch missions," he added.

In total, 24 PS4-Orbital Experiment Module payloads were deployed on board the PSLV-C60 SpaDeX mission to support a wide array of scientific and technological endeavours.

है।

- यह अंतरिक्ष क्षेत्र में निजी कंपनियों के लिए समान अवसर प्रदान करता है।
- यह भारत में एक जीवंत और प्रतिस्पर्धी अंतरिक्ष पारिस्थितिकी तंत्र विकसित करने पर केंद्रित है।

UPSC Mains Practice Question

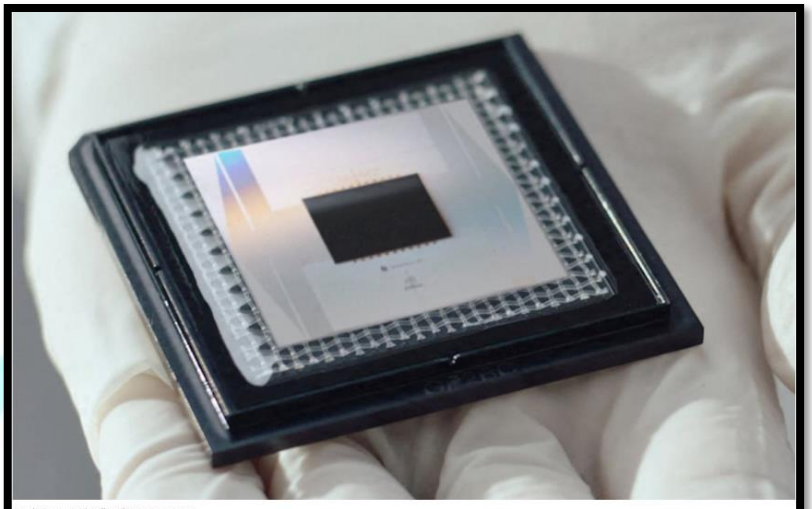
प्रश्न: "भारत को वैश्विक अंतरिक्ष बाज़ार में एक प्रमुख खिलाड़ी के रूप में परिवर्तित करने में पी.एस.एल.वी. की भूमिका का आलोचनात्मक विश्लेषण कीजिए।" (200 words/12.5m)

Page 07 : Prelims Fact

- गूगल ने अपनी नई क्वांटम चिप, विलो का अनावरण किया, जो जटिल कम्प्यूटेशनल समस्याओं को हल करने के लिए त्रुटि सुधार और दक्षता में प्रगति को प्रदर्शित करती है।

विलो क्या है?

- विलो गूगल द्वारा विकसित एक क्वांटम प्रोसेसर है।
- इसमें 105 भौतिक क्यूबिट हैं, जिनका उपयोग सूचना को संग्रहीत और संसाधित करने के लिए किया जाता है।
- विलो अत्यंत कम तापमान पर संचालित होता है, जो पूर्ण शून्य (-273 डिग्री सेल्सियस) के करीब है।
- प्रोसेसर त्रुटियों को संभालने के लिए डेटा क्यूबिट और माप क्यूबिट दोनों का उपयोग करता है।
- विलो जैसे क्वांटम कंप्यूटर क्यूबिट का उपयोग करके शास्त्रीय कंप्यूटरों से अलग तरीके से काम करते हैं, जो एक ही समय में 0 और 1 दोनों का प्रतिनिधित्व कर सकते हैं (सुपरपोजिशन)।
- विलो त्रुटि-सुधार विधियों का उपयोग करता है, जो इसे अन्य क्वांटम कंप्यूटरों की तुलना में तेज़ और अधिक विश्वसनीय बनाता है।
- इसने एक कठिन कार्य, रैंडम सर्किट सैंपलिंग को मिनटों में पूरा किया, जिसे शास्त्रीय कंप्यूटरों को लाखों साल लगते।
- विलो ड्रग डिज़ाइन, जलवायु विज्ञान और अनुकूलन जैसे क्षेत्रों में जटिल समस्याओं को हल करने की संभावना दिखाता है।



Google Quantum AI's Willow chip. GOOGLE/REUTERS

Willow is a small chip for Google but a quantum leap for computing

A major impediment to realising quantum computers is the fragility of quantum states. Qubits collapse at the slightest disturbance. This limits the amount of time for which qubits can hold information, how error-free a quantum computer can keep its calculations, and how well it can be scaled

S. Srinivasan

Google recently unveiled its latest quantum processor, named 'Willow.' The research team that built it also tested it, and the results were published in *Nature*.

They created a great level of buzz about the realisability of quantum computers that could tackle many practical problems.

The results also kicked up intriguing debates about explaining the power of quantum information processing and how they could solve problems that even the most powerful classical computers struggle with.

Bit versus qubit

Computers process information stored in an array of 0s and 1s. In classical computers, some physical system with two possible states is used to represent these 0s and 1s. These physical systems are called bits. A common example is an electric circuit that allows two levels of voltage, one called 0 and the other called 1. A classical computer is a collection of bits together, and the information flowing in and out of bits is controlled and manipulated by physical operations called gate operations. For example, an 'AND' gate accepts two inputs, each either 0 or 1, and outputs 1 if both inputs are 1 and 0 for any other combination of inputs.

A quantum bit, or qubit, has two distinct states representing 0 and 1. More importantly, a qubit can be in states that are also combinations of 0 and 1. This feature is called quantum superposition. Classical bits can't do this. Because of this ability, each qubit needs two distinct numbers to represent the contributions of 0 and 1 respectively, in the qubit's state. If we have two bits, we need two numbers, one for each bit, to represent the state of the collection. With two quantum bits, we need four numbers to represent the state. For 10 bits, we need 10 numbers to represent the state of the collection. For ten qubits, we need 2^{10} (1,024) numbers.

This exponential growth in the information required to represent qubits' states and the superposition of states are the major reasons why quantum computers could be more efficient and powerful than classical computers. Like a classical computer, a quantum computer is also a collection of qubits and a host of physical operations called quantum gates that change the states of qubits to perform calculations.

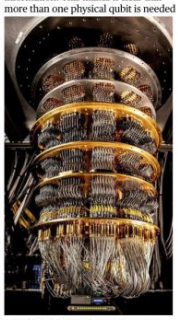
Difficult to isolate

A major impediment to realising quantum computers is the fragile nature of quantum states. Specifically, while classical bits are robust and long-lasting, qubits are fragile and collapse quickly at the slightest disturbance. This in turn limits the amount of time for which qubits can hold information, how errors-free the quantum computer can keep its calculations, and how well a quantum computer can be scaled.

It is difficult to isolate a physical gadget to avoid perturbations due to external noise. Therefore, computations are prone to errors. For example, when a bit is expected to represent 0, there is a small chance it may be in the state representing 1. This is called the bit flip error. Methods to identify and fix these errors are called error-correction protocols.

A single 0 is represented by three bits in the state 000 (corresponding to each bit in the state 0). If there is a bit-flip error, the resulting state could be 100, 010, or 001 (depending on whether the first, second, or third bit is flipped). Similarly, 1 is represented as 111. If we need to encode 01 as the basic information, its true representation is 000111. Looking at the concatenated sequence in groups of three bits, the occurrence of 100, 010, 001, 011,101, or 110, will mean an error has crept in. When three physical bits represent one logical digit, it is easy to figure out which bit has flipped and correct it suitably before the next step in the computation.

Similarly, one way to mitigate the effect of errors in a quantum computer is to correct them using additional qubits that keep track of errors creeping in during computations. This is a logical answer to the error problem; it is, however, unsuitable for qubits in superposed states. Creating exact copies of unknown superposed states is prohibited by the no-cloning theorem of quantum physics. On the other hand, error correction often requires redundancy, i.e., providing more qubits than what is needed to encode information. This makes it clear that more than one physical qubit is needed to represent a single logical qubit. (Qubits also have another type of error called phase flip error, which presents similar challenges to error correction.)



A cryostat refrigerator for cooling quantum computing chips at Google's Quantum AI lab in Santa Barbara, California. VIA REUTERS

One effective method to detect and correct errors in a quantum computer without also violating the no-cloning theorem is called surface code. Here, engineers arrange an array of qubits on a grid. The qubits are grouped into two categories, namely data qubits and measurement qubits. While the error in data qubits is what we wish to identify and correct, any attempt to measure them will force them out of superposition, and whatever information they encode will be lost.

To avoid this, the surface code method provides the set of measurement qubits. These qubits are entangled with data qubits through suitable gate operations. (If two qubits are entangled, any measurement of one particle will instantaneously cause the other particle to lose its superposition state.) In this setup, the presence of errors in the data qubits is inferred by making suitable measurements of the measurement qubits while using the gates to prevent the data qubits from being affected, and thus correcting inconsistencies in data qubits.

The error rate

According to Google, its new quantum processor, Willow, has significantly better error correction and is thus significantly faster than other quantum computers, not to mention classical computers as well. The researchers who developed it tested it by using it to solve a computationally hard problem.

Willow houses 105 physical qubits and operates at temperatures close to the theoretically possible lowest temperature (0 K, -273.15° C). Nearly half of these are data qubits, and the remaining are measurement qubits. The superconducting qubits are not strictly two-state systems. When performing gate operations, the physical system can get excited or 'leak' to states other than 0 and 1. These excited states can subsequently interfere with the computations and introduce errors. So a few qubits – i.e. the measurement qubits – are reserved to correct such leakage errors.

Coherence time is the duration over which an intended state (typically, superpositions) of a qubit can survive without being changed due to interactions with the environment or with other parts of the computer. The coherence time of data qubits on Willow is about 100 microseconds, which is more than the coherence time of the physical qubits. This is a consequence of the error correction protocols used. This in itself is an interesting result because it means the information-holding time can be improved by external manoeuvring.

The next milestone for researchers to achieve is to lower the error rate – calculated as the ratio of the number of qubit errors to the number of gate operations – as they build ever-larger quantum computers with more physical qubits and more error correction operations. Google alone has progressed from 3-by-3 to 5-by-5 to 7-by-7 arrays of data qubits, and the error rate has decreased by more than half in each step.

Willow houses 105 physical qubits and operates at temperatures close to the theoretically possible lowest temperature. Nearly half of these are data qubits, and the remaining are measurement qubits

What one expects for a collection of qubits on a circuit is that the error rate either remains the same or increases as the number of qubits is increased. That the error rate becomes smaller as more qubits are added is the below-the-threshold capability of Willow's architecture and operation. This is vital to achieving quantum processors with enough qubits that perform almost error-free computations of problems of practical relevance – the ultimate goal.

No dead ends

The particular computationally difficult task with which Google tested Willow is called random circuit sampling (RCS). In the RCS task, Willow has to calculate the probability of occurrence of possible strings of 0s and 1s in the output when the quantum gates that act on the qubits are chosen randomly. If there is no noise, RCS is a computationally hard task, meaning that the number of calculations required to make the prediction increases exponentially with the input size.

Willow completed the RCS task for random gate operations realisable on Willow in a few minutes. The researchers estimated that the same task on the most powerful classical computer available today would take 10 septillion years (i.e., 1 followed by 24 zeroes). To compare, the universe's age in years is approximately 1 followed by 10 zeroes. It is plausible that classical computers running better algorithms may eventually match Willow's feat, although researchers are not aware of such improvements today.

Researchers are still a long way away from realising quantum processors of reasonable size to be useful in practical contexts. This said, it's only natural that Willow created the sort of buzz that it did: it has shown that the major issues in realising a reliable quantum computer can be addressed and surmounted, that they are not dead ends. The work of the Google team provides hope that quantum computers may soon help us unravel nature's mysteries and also solve computationally difficult problems in drug design, materials science, climate modelling, and optimisation, among others – all with deep societal impact.

(S. Srinivasan is a professor of physics at Krea University. sivakumar.srinivasan@krea.edu.in)

UPSC Mains Practice Question

प्रश्न: "बताइए कि क्वांटम चिप्स पारंपरिक सिलिकॉन-आधारित चिप्स से किस प्रकार भिन्न हैं। उनके लाभ और सीमाओं पर प्रकाश डालिए।" (200 words/12.5m)

लेख में राजनीतिक नियुक्तियों से प्रभावित अमेरिकी सुप्रीम कोर्ट के मतभेदों की तुलना भारत के विविध न्यायिक मतभेदों - राजनीतिक, सामाजिक और बौद्धिक - से की गई है।

The nature of dissent in the Indian judiciary

The dissents of the U.S. Supreme Court are largely based on the political inclination of judges, who are direct appointees of the President, confirmed by the Senate. Indian judicial dissents have, however, varied from political, to social to purely intellectual disagreements

LETTER & SPIRIT

Shivani Vij

Dissent is an important facet of a true democracy. While this is true for citizens in the republic, or parliamentarians in the legislature, it is also true for judges of a constitutional court. India and the U.S. are two strong democracies with opinionated judiciaries. Though dissents in the Indian Supreme Court (SC) are as powerful as the U.S. Supreme Court (SCOTUS), their reasons differ.

The dissents of SCOTUS are largely based on the political inclination of judges, who are direct appointees of the President, confirmed by the Senate. Justice Stephen Breyer, for instance, an appointee by the Democrats, has shown himself to be pro-affirmative action, pro-abortion and against capital punishment. His dissent in *Glossip versus Gross* (2015) held that capital punishment violated the Eighth Amendment of the Bill of Rights, which prevented inhumane and degrading punishment. Justice Samuel Alito, on the other hand, a Republican appointee, is both anti-abortion and anti-gay rights. His dissent in *Obergefell versus Hodges* (2015) reasoned that the Constitution did not address the right to marry of same-sex couples and therefore, the courts could not grant it.

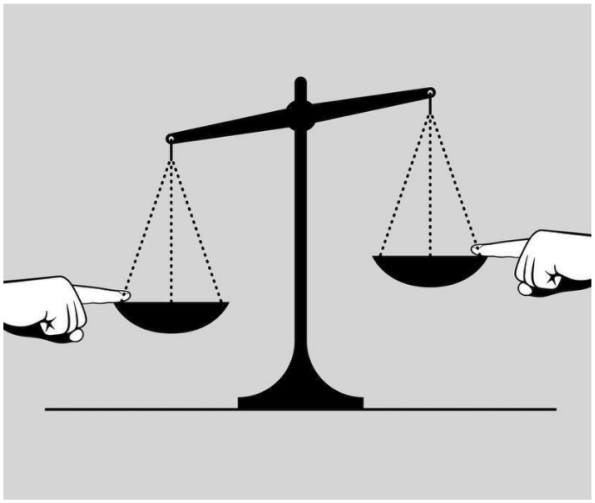
Indian judicial dissents have, however, varied from political, to social to purely intellectual disagreements.

Political dissent

Unlike the U.S., Indian judges are not appointees of the ruling party and are selected through a collegium of senior judges. Their decisions do not have a similar political undertone and may or may not associate with the view of the ruling party that was in power when they were appointed.

In the case of *ADM Jabalpur* (1976), four out of five judges held that the enforcement of fundamental rights, including Article 21, remained suspended during the national emergency under Article 359. The majority judgment was the politically sound one at the time. Justice H.R. Khanna, however, withstood the political pressure of the time, dissented and reasoned that if Article 21 remained suspended, there would be no recourse to deprivation of life and liberty, albeit in emergency. His resolve to keep 'rights' intact amidst a turbulent India, strengthened his voice on the Bench and also became the law later by a constitutional amendment to Article 359.

Another example of this could be found in the *P.V. Narasimha Rao* (1998) case, where the question was if accepting bribes for voting in Parliament was covered under parliamentary privilege, and whether it enjoyed immunity from prosecution. The majority said yes, but Justices S.C. Agarwal and A.S. Anand dissented. The majority view reflected the political atmosphere at the time and was favourable to the ruling Congress party. However, the dissent endured and later became the view of the court in *Sita Soren* (2023), where the SC overruled such an expanded view of immunity.



ISTOCKPHOTO

Dissent which is social

A dissent could also reflect a different social understanding or implication of a legal issue. In *Shayara Bano* (2017), the SC dealt with the constitutionality of the 'triple talaq' as a form of divorce among the Sunnis in Islam. Justices J.S. Khehar and Abdul Nazeer dissented with the majority, which struck down triple talaq for violating the rights of life of Muslim women. The two judges reasoned that the triple talaq was an integral part of the Sunni personal law and not violative of constitutional rights. Further, it was not for the courts to determine its constitutionality, since it is only the legislature that can intervene in socially unacceptable practices in different religions.

The decision in *Aishat Shifa* (2022) also displayed a discordant understanding of religion. This case did not have a dissent but had two separate opinions. The question was whether the State could prohibit Muslim girls from wearing a hijab to school by enforcing a universal dress code. Justice Hemant Gupta was of the view that secularism permitted the State to do so since religion was a private affair, which had no space in classrooms of a State-run school. Justice Dhulia, on the other hand, disagreed and considered 'diversity', 'plurality' and 'tolerance' as values underpinning the Constitution. This disagreement stemmed from different understandings of secularism.

Intellectual critique

A dissent could also be plainly intellectual, like that of Justice B.V. Nagarathna in *Lalta Prasad Vaish* (2024), the industrial alcohol case. Here nine judges of the SC determined whether States have the legislative competence to tax 'industrial alcohol', or does only the Centre have the authority. Disagreeing with eight judges, Justice Nagarathna said that States could not tax industrial alcohol. The disagreement was on the interpretation of the term 'intoxicating liquor' under Entry 8 of List 2 in the Seventh Schedule of the Constitution. The majority believed that this legislative entry was broad enough to include liquor unfit for human consumption, and therefore industrial alcohol. States could therefore tax it. This reasoning did not sit well with Justice Nagarathna, who opined that industrial alcohol is used for manufacturing purposes and cannot be subsumed within 'intoxicating liquor', which is liquor for human consumption. The difference of opinion was solely on the interpretation of the text of the Constitution –an intellectual one.

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THE GIST

- Unlike the U.S., Indian judges are not appointees of the ruling party and are selected through a collegium of senior judges.
- In *Shayara Bano* (2017), the SC dealt with the constitutionality of the 'triple talaq' as a form of divorce among the Sunnis in Islam. Justices J.S. Khehar and Abdul Nazeer dissented with the majority, which struck down triple talaq for violating the rights of life of Muslim women.
- A dissent could also be plainly intellectual, like that of Justice B.V. Nagarathna in *Lalta Prasad Vaish* (2024), the industrial alcohol case.

लोकतंत्र में असहमति: एक तुलनात्मक अवलोकन:

- **लोकतंत्र में असहमति की भूमिका**
  - o असहमति एक जीवंत लोकतंत्र का एक अनिवार्य घटक है, जिसमें न्यायपालिका भी शामिल है।
  - o जबकि भारतीय और अमेरिकी सुप्रीम कोर्ट दोनों में शक्तिशाली न्यायिक असहमति है, दोनों देशों के बीच अंतर्निहित कारण अलग-अलग हैं।

- **यू.एस. सुप्रीम कोर्ट (SCOTUS) में असहमति**
  - o SCOTUS असहमति अक्सर नियुक्त न्यायाधीशों के राजनीतिक झुकाव से प्रभावित होती है।
  - **o उदाहरण:** न्यायमूर्ति स्टीफन ब्रेयर (डेमोक्रेट द्वारा नियुक्त) ने सकारात्मक कार्रवाई के पक्ष में, मृत्युदंड विरोधी विचारों का समर्थन किया, जैसा कि ग्लोसिप बनाम ग्रॉस (2015) में उनकी असहमति में देखा गया।
  - **o उदाहरण:** न्यायमूर्ति सैमुअल एलिटो (रिपब्लिकन द्वारा नियुक्त) ने समलैंगिक विवाह और गर्भपात के अधिकारों का विरोध किया, जैसा कि ओबर्गेफेल बनाम होजेस (2015) में उनकी असहमति में प्रदर्शित हुआ।
- **भारतीय सर्वोच्च न्यायालय में राजनीतिक असहमति**
  - o अमेरिका के विपरीत, भारतीय न्यायाधीशों का चयन वरिष्ठ न्यायाधीशों के एक कॉलेजियम द्वारा किया जाता है, जिससे निर्णयों में राजनीतिक प्रभाव कम हो जाता है।
  - o उदाहरण: एडीएम जबलपुर (1976)- न्यायमूर्ति एच.आर. खन्ना ने आपातकाल के दौरान मौलिक अधिकारों को निलंबित करने के खिलाफ असहमति जताई, एक ऐसा रुख जो बाद में एक संवैधानिक संशोधन के माध्यम से कानून बन गया।
  - o उदाहरण: पी.वी. नरसिम्हा राव (1998)- न्यायमूर्ति अग्रवाल और आनंद ने रिश्वत लेने के संबंध में संसदीय प्रतिरक्षा पर असहमति जताई, एक रुख जिसे बाद में सीता सोरेन (2023) में खारिज कर दिया गया।
- **भारतीय सर्वोच्च न्यायालय में सामाजिक असहमति**
  - o असहमति कानूनी मुद्दों पर विभिन्न सामाजिक विचारों को दर्शा सकती है, खासकर जब वे व्यक्तिगत या धार्मिक मामलों को छूते हैं।
  - o उदाहरण: शायरा बानो (2017) - न्यायमूर्ति खेहर और नजीर ने ट्रिपल तलाक को खारिज करने वाली बहुमत की राय से असहमति जताई, यह तर्क देते हुए कि यह सुन्नी पर्सनल लॉ का एक अभिन्न अंग था।
  - o उदाहरण: ऐशत शिफा (2022) - जस्टिस गुप्ता और धूलिया के इस बात पर अलग-अलग विचार थे कि स्कूलों में हिजाब पर प्रतिबंध धर्मनिरपेक्षता का उल्लंघन करता है या नहीं।
- **भारतीय सर्वोच्च न्यायालय में बौद्धिक असहमति**
  - o कुछ असहमति संवैधानिक व्याख्या पर बौद्धिक बहस में निहित हैं।
  - o उदाहरण: लालता प्रसाद वैश (2024) - जस्टिस नागरत्ना ने संविधान में "नशीली शराब" की व्याख्या पर असहमति जताई, जिसमें पाठ की स्पष्टता पर ध्यान केंद्रित किया गया।

निष्कर्ष

- असहमति न्यायिक स्वतंत्रता को बनाए रखने और लोकतंत्रों में कानूनी मिसाल कायम करने के लिए एक महत्वपूर्ण उपकरण के रूप में कार्य करती है।
- यह कानूनी सिद्धांतों और सामाजिक मूल्यों के साथ गहन जुड़ाव को बढ़ावा देती है।

UPSC Mains Practice Question

प्रश्न: न्यायिक असहमति लोकतंत्र के लिए महत्वपूर्ण है। भारतीय सर्वोच्च न्यायालय में असहमति की प्रकृति और महत्व पर चर्चा करें, इसकी तुलना अमेरिकी सर्वोच्च न्यायालय से करें। (200 words/12.5m)

COP29, climate finance and its optical illusion

Anwar Sadat

teaches international environmental law at the Indian Society of International Law

Finance has been a major point of climate change negotiation since the launching of the United Nations-led climate change negotiations in 1991, producing the United Nations Framework Convention on Climate Change (UNFCCC) 1992. Article 4 (7) of the UNFCCC clearly says "that the extent to which the developing country Party will be fulfilling their climate action commitments is contingent on how much finance and technology they get from developed country Parties".

The Paris Agreement retains, in Article 9(1), the provision relating to finance, binding the developed countries to mobilise finance for the developing countries. The sixth assessment report of the Intergovernmental Panel on Climate Change (IPCC) has described finance, capacity-building and a transfer of technology as critical enablers of climate action in developing countries in the backdrop of anthropogenic greenhouse gas emissions responsible for 1.1° Celsius of warming (above what it was in 1850-1900) in 2011-20.

Falling short

In pursuance of their responsibility, the developed countries agreed in 2009 that they would collectively mobilise $100 billion a year by 2020. The $100 billion mark, met by the developed countries only in 2022, does not match the growing needs of climate finance corresponding to the developing countries' nationally determined contributions (NDCs).

Second, the mark has been considered in many reports to be well-short of estimated finance to fund the actions needed across different sectors to keep the average global temperature rise within 1.5° Celsius by the end of this century. The 29th Conference of the Parties (COP 29) meeting at Baku, Azerbaijan, in November 2024, was meant for the Parties to the Paris Agreement to have a New Collective Quantified Goal on Climate Finance (NCQG), replacing a $100 billion floor and laying a new floor taking into account the needs and the priorities of developing countries to tackle the climate crisis.

The scale and the quality of climate finance need to be raised, with sincere efforts being made to have a coherent climate finance architecture in place

In response to persistent demand by all the major negotiating groups belonging to the developing south that the developed north mobilise $1.3 trillion by 2030, the developed north agreed to release only $300 billion per year by 2035.The $300 billion mark ignores the estimation by the UNFCCC's Standing Committee on Finance (SFC) relating to the annual financial needs of developing countries, which it derived from their NDCs. As in the SFC's estimation, the financial needs stand at between $455 billion-$584 billion. Even these figures cover around half of the 5,760 costed and non-costed needs identified by 98 developing countries in their NDCs (Third Report of the Independent High-level Expert Group on Climate Finance, November, 2024).

The decision on the NCQG makes reference to the financial needs of those particularly vulnerable to the adverse effects of climate change such as the least developed countries (LDC) and small island developing states (SIDS). But the NCQG does not make minimum allocation floors for the LDCs and SIDS.

During the meeting, the Alliance of Small Island States demanded the allocation of $39 billion for SIDS while the LDC demanded at least $220 billion for them. It appears that the first-ever Global Stocktake (GST) in consonance with the Paris Agreement in 2023 also failed in influencing the cause of loss and damage concern in the NCQG. In the GST estimation, economic costs are estimated to reach $447 billion-$894 billion per year by 2030.

India and the NCQG

India's perspective on the delivery of climate finance from the developed north to the developing south is derived from equity frame expressed in the principle of common but differentiated responsibility and respective capability. It is notable that India joined the Montreal Protocol to protect the ozone layer from further depletion, which led to setting up of a multilateral fund of $240 million, including an additional $80 million for use in India, China and other eligible low-income Parties. During COP29, India specified that the new floor should mobilise $1.3 trillion by 2030, of which at least $600 billion should come in the form of grants and concessional resources. On other major agenda items, mitigation work programme, just transition work programme and GST, India's representative called for an adequate provisioning of finance and other means of implementation to fulfil them. India's submission of NDC next year is contingent on a decision relating to finance (Earth Negotiations Bulletin–, November 22, 2024).

India has expressed its extreme disappointment on the adoption of the NCQG in its present form, shape – which was without its consultation. It made serious objections against the COP29 presidency and the Secretariat in the way it was finalised – which is at the expense of trust, collaboration and in contravention of the UNFCCC's norm, on an issue which is a creation of the developed north but which affects developing countries more. India outrightly rejected the NCQG. It also added that this NCQG expects the developing world to mobilise resources. In India's view, the paltry sum will influence the ambition and the implementation of its NDC.

What the developed north must do

The pith and substance of the Paris Agreement are the NDCs. In expecting the developing south to bring out more ambitious NDCs relating to the mitigation of greenhouse gases and implementing the same effectively, it is equally important on the part of the developed north to raise their scale and quality of climate finance and also make sincere efforts in putting in place a coherent climate finance architecture.

This will ensure adequate, directly accessible and affordable climate finance to the developing countries.

GS Paper 02 : अंतर्राष्ट्रीय संबंध GS Paper 03 : पर्यावरण

PYQ: (UPSC CSE (M) GS-3 2021): जलवायु परिवर्तन पर संयुक्त राष्ट्र फ्रेमवर्क कन्वेंशन (यूएनएफसीसीसी) के लिए पार्सेस सम्मेलन (सीओपी) के 26वें सत्र के प्रमुख परिणामों का वर्णन करें। इस सम्मेलन में भारत द्वारा क्या प्रतिबद्धताएँ व्यक्त की गई हैं? (250 words/15m)

UPSC Mains Practice Question: पेरिस समझौते के सफल क्रियान्वयन को सुनिश्चित करने में समतापूर्ण जलवायु वित्त के महत्व पर चर्चा करें। विकसित और विकासशील देशों के बीच असमानताओं को कैसे दूर किया जा सकता है? (250 Words /15 marks)

संदर्भ:

- विकसित देशों का 2035 तक 300 बिलियन डॉलर का जलवायु वित्त लक्ष्य विकासशील देशों की न्यायसंगत समर्थन की मांग से कम है।

जलवायु परिवर्तन वार्ता में वित्त

- 1991 में संयुक्त राष्ट्र के नेतृत्व वाली चर्चाओं की शुरूआत के बाद से वित्त जलवायु परिवर्तन वार्ता का केंद्र रहा है, जिसकी परिणति UNFCCC (1992) में हुई।
- UNFCCC का अनुच्छेद 4(7) विकासशील देशों की जलवायु कार्रवाई प्रतिबद्धताओं को विकसित देशों द्वारा प्रदान किए गए वित्त और प्रौद्योगिकी से जोड़ता है।
- पेरिस समझौता (अनुच्छेद 9(1)) विकसित देशों को विकासशील देशों के लिए वित्त जुटाने के लिए बाध्य करता है, जिसमें IPCC की छठी मूल्यांकन रिपोर्ट में वित्त को एक महत्वपूर्ण सक्षमकर्ता के रूप में पहचाना गया है।

प्रतिबद्धताओं से कम पड़ना

- विकसित देशों ने 2009 में 2020 तक सालाना 100 बिलियन डॉलर जुटाने का वादा किया था, यह लक्ष्य 2022 में ही पूरा हो पाया।
- यह राशि विकासशील देशों के NDC के साथ संरेखित जलवायु कार्यों के लिए बढ़ती वित्तीय जरूरतों को पूरा करने के लिए अपर्याप्त है।
- नवंबर 2024 में बाकू, अज़रबैजान में 29वें COP का लक्ष्य जलवायु वित्त पर एक नया सामूहिक परिमाणित लक्ष्य (NCQG) स्थापित करना था, जो $100 बिलियन की न्यूनतम सीमा को प्रतिस्थापित करेगा।
- 2030 तक प्रति वर्ष $1.3 ट्रिलियन की विकासशील देशों की माँगों के बावजूद, विकसित देशों ने 2035 तक प्रति वर्ष केवल $300 बिलियन का प्रस्ताव रखा।

जलवायु वित्त लक्ष्यों में अपर्याप्तता

- UNFCCC की वित्त समिति के अनुमान के अनुसार, विकासशील देशों को जलवायु कार्रवाई के लिए प्रति वर्ष $455-$584 बिलियन की आवश्यकता है।
- NCQG कम विकसित देशों (LDC) या छोटे द्वीप राज्यों (SIDS) के लिए विशिष्ट वित्तपोषण राशि निर्धारित नहीं करता है।

- SIDS ने COP29 के दौरान $39 बिलियन और LDC ने $220 बिलियन की माँग की, लेकिन इसे नज़रअंदाज़ कर दिया गया।
- ग्लोबल स्टॉकटेक 2023 ने दिखाया कि भविष्य की लागत 2030 तक प्रति वर्ष $447-$894 बिलियन तक पहुँच सकती है, लेकिन इसे नज़रअंदाज़ कर दिया गया।

NCQG पर भारत का रुख

- भारत समानता और साझा लेकिन अलग-अलग जिम्मेदारी और संबंधित क्षमता के सिद्धांत पर आधारित जलवायु वित्त की वकालत करता है।
- भारत ने 2030 तक सालाना 1.3 ट्रिलियन डॉलर जुटाने का आह्वान किया, जिसमें कम से कम 600 बिलियन डॉलर अनुदान और रियायती संसाधन शामिल होंगे।
- भारत ने एनसीक्यूजी को बिना परामर्श के अपनाए जाने पर निराशा व्यक्त की और प्रस्ताव को अपर्याप्त और अनुचित बताते हुए खारिज कर दिया।
- भारत ने इस बात पर जोर दिया कि अपर्याप्त वित्त महत्वाकांक्षी एनडीसी को लागू करने और प्रस्तुत करने की उसकी क्षमता को प्रभावित करता है।

विकसित देशों की जिम्मेदारियाँ

- पेरिस समझौता विकासशील देशों के महत्वाकांक्षी और प्रभावी एनडीसी पर निर्भर करता है।
- विकसित देशों को जलवायु वित्त के पैमाने और गुणवत्ता को बढ़ाना चाहिए और एक सुसंगत जलवायु वित्त वास्तुकला स्थापित करनी चाहिए।
- विकासशील दक्षिण को अपने जलवायु कार्रवाई लक्ष्यों को प्रभावी ढंग से प्राप्त करने में सक्षम बनाने के लिए पर्याप्त, सुलभ और किफायती जलवायु वित्त आवश्यक है।

निष्कर्ष

- विकासशील देशों को अपनी जलवायु प्रतिबद्धताओं को पूरा करने और वैश्विक जलवायु लक्ष्यों को प्राप्त करने में सक्षम बनाने के लिए पर्याप्त जलवायु वित्त महत्वपूर्ण है।
- विकसित देशों को वित्त में उल्लेखनीय वृद्धि करके और सुलभ, किफायती तंत्र सुनिश्चित करके जिम्मेदारी लेनी चाहिए।
- समतामूलक वित्त के बिना, जलवायु परिवर्तन को कम करने और पेरिस समझौते के लक्ष्यों को प्राप्त करने के वैश्विक प्रयास अपर्याप्त रहेंगे।