

Single day spike of 9577 cases with death toll of 253.

- 1. Gujarat and Maharashtra escapes the fury of Nisarga. In Maharashtra damage has been minimal.**
- 2. G 11**
- 3. India China Border Dispute**

The Central government will enact a law to dismantle the monopoly of APMC mandis in the wholesale trading of farm commodities.

The initiative for APMC reforms should have come from the states.

What is the similarity?

1966 - Agriculture is a state subject under the Constitution.

But the Green Revolution wouldn't have happened without the Centre approving the import of 18,000 tonnes of seeds of high-yielding wheat varieties from Mexico in 1966.

Now - The same goes for the Centre's decision to enact a Central law to dismantle the monopoly of the Agricultural Produce Market Committee (APMC) mandis in wholesale trading of farm commodities.

It is all very well to say that "agriculture" and "markets and fairs" fall under the State List of the Seventh Schedule.

What the state governments should have done?

In an ideal situation, from a cooperative federalism perspective, the initiative for APMC reforms should have come from the states.

However, state governments have done very little all these years to remove barriers to trade in farm produce.

Farmers, like any businessmen, should have the freedom to sell their produce to anyone, anywhere and anytime.

This, in turn, is also contingent upon processors, traders, retailers or exporters being able to buy directly from them.

But there have been times (for Green Revolution or the nod to Bt cotton cultivation in 2002) when the Centre had to necessarily take the lead.

What is the justification?

Most state APMC laws permit first sale of farm produce to take place only in notified mandis within the particular tehsils or talukas.

Buyers, too, need to obtain individual licenses from each APMC in order to transact.

Effectively, there is no national market for agricultural commodities.

Instead, there are some 2,500 markets controlled by commission agents who mediate between sellers and buyers even when not required.

This arrangement is anathema to the spirit of liberalisation.

This arrangement also goes against Article 301 of the Constitution.

[Article 301 - Freedom of trade and commerce throughout the territory of India]

If states haven't freed agricultural produce trading within their own territories, the Centre is well within its rights to enact a law using the provisions of entry 33 of the Concurrent List.

The latter specifically deals with agricultural produce, including "foodstuffs", "cattle fodder" and "raw cotton".

How the Central law should be?

The Central government must make it clear that the objective behind its proposed law is not to dismantle APMCs.

Farmers will continue to bring their produce to mandis that have good infrastructure and where they are likely to find more buyers.

But that should be a matter of choice, both for farmers and buyers, not APMC.

United States President Donald Trump has proposed for a "G11" Summit.

What is G11?

G11 will be the expansion of the G7 grouping.

[G7 or Group of Seven is an intergovernmental economic organization.

It consists of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.]

G11 will include G7 countries, India, Australia, South Korea, and Russia.

It is being widely perceived as an "anti-Chinese" platform.

Why was G11 initiated?

Outdated - Mr Trump cancelled the G7 summit, originally scheduled for June at Camp David, on account of the Covid-19 pandemic.

He has declared this 45-year-old organisation "outdated" because he didn't feel it "properly represents the world".

This is a valid assertion, given the realignments of global economic power over the past half-century.

Global realignments - The United Kingdom's position after Brexit will weaken its already declining global heft.

Italy has slipped behind India in terms of gross domestic product (GDP).

But the exclusion of China, the world's second-largest economy, has raised questions about Trump's intentions.

What is the question for India?

The big question for India is whether, if this invitation is issued, should be accepted, given its own current strained relations with China.

On balance, the answer should be yes, both in terms of serving,

India's own geo-strategic interests and

Within the dynamics of the immediate and long-term India-China relationship.

China's exclusion, however, should not stop India's acceptance.

How will India benefit?

A forum like G11 offering an opportunity for an exchange of views on issues that are important to India can be of considerable value.

In particular, it may offer an occasion to discuss with some of the world's most important leaders the impact of Covid-19 on the global economy.

It will help lay down the contours of a coordinated response.

How will China view India's acceptance?

The question of India's acceptance of any such invitation may be perceived as provoking China at a time when it is making aggressive inroads into Indian Territory.

This move, in turn, is seen as partial retaliation for the Indian government's closer embrace of a US establishment, which has been increasingly hostile to China.

On the contrary, it is precisely because of these developments that the India should be receptive to G11 invitation.

What should India do?

India would have the virtue of transmitting the message that no other country can dictate India's foreign policy.

Being seen to be intimidated by China's military muscle-flexing in Sikkim and Ladakh leaves India open to pressure from China to exclude deeper partnerships with Japan or Australia.

Both Japan and Australia, together with the US, are part of the 13-year-old Quadrilateral Security Dialogue.

In addition, India is involved in groupings that exclude China, such as the Indian Ocean Rim Association for Regional Cooperation (IORA).

So accepting potential G11 membership should not be seen as a precedent-setting move.

Quick Facts

Quadrilateral Security Dialogue (Quad)

QSD is a closed group consisting of India, Australia, Japan & USA.

It was initiated by Japan in 2007.

It perceives this forum as a coalition of maritime democracies.

Securing a rules-based global order, liberal trading system and freedom of navigation are believed to be the guiding principles.

Indian Ocean Rim Association (IORA)

IORA is an international organisation consisting of 22 coastal states bordering the Indian Ocean.

It is formerly known as the Indian Ocean Rim Initiative and Indian Ocean Rim Association for Regional Cooperation (IOR-ARC).

It is a regional forum bringing together representatives of Government, Business and Academia, for promoting co-operation and closer interaction among them.

It is based on the principles of Open Regionalism for strengthening Economic Cooperation particularly on Trade Facilitation and Investment, Promotion as well as Social Development of the region.

The Coordinating Secretariat of IORA is located at Ebene, Mauritius.

Ionospheric Electron Density (IED)

The ionosphere exists between about 90 and 1000 km above the earth's surface. Radiation from the sun ionizes atoms and molecules here, liberating electrons from molecules and creating a space of free electron and ions.
Studying IED

The ionospheric variability is greatly influenced by both solar originated processes and the neutral atmosphere origin. Scientists have tried to model the ionosphere using theoretical and empirical techniques; however, the accurate prediction of electron density is still a challenging task. In recent years, Artificial Neural Networks (ANNs) are showing potential to handle more complex and non-linear problems.
What are Artificial Neural Networks (ANNs)?

ANNs are computing systems vaguely inspired by the biological neural networks that constitute animal brains. Such systems "learn" to perform tasks by considering examples, generally without being programmed with task-specific rules. For example, in image recognition, they might learn to identify images that contain cats by analyzing example images that have been manually labeled as "cat" or "no cat" and using the results to identify cats in other images. They do this without any prior knowledge of cats, for example, that they have fur, tails, whiskers and cat-like faces. Instead, they automatically generate identifying characteristics from the examples that they process.
Significance of IED

Due to the ability of ionized atmospheric gases to refract high frequency (HF, or shortwave) radio waves, the ionosphere can reflect radio waves directed into the sky back toward the Earth. Radio waves directed at an angle into the sky can return to Earth beyond the horizon. This technique, called "skip" or "skywave" propagation, has been used since the 1920s to communicate at international or intercontinental distances.

At the Pangong Tso lake area on the LAC, there have been some clashes between Indian and Chinese soldiers.

What is LAC?

The Line of Actual Control (LAC) is the disputed boundary between India and China.

The LAC is divided into three sectors: western, middle and eastern.

The countries disagree on the exact location of the LAC in various areas,

India claims that the LAC is 3,488 km long,

China believes it to be around 2,000 km long.

The two armies try and dominate by patrol to the areas up to their respective perceptions of the LAC. This often brings them into conflict.

The LAC mostly passes on the land, but Pangong Tso is a unique case where the LAC passes through the water as well.

Why is there a dispute in Pangong Tso?

The points in the water at which the Indian claim ends and Chinese claim begins are not agreed upon mutually.

Most of the clashes between the two armies occur in the disputed portion of the lake.

As things stand, 45 km-long western portion of the lake is under Indian control, while the rest is under China's control.

Eastern Ladakh forms the western sector, to the east of the Karakoram and Ladakh Ranges.

It runs from the Karakoram Pass in the north to Chumur in the south, almost bordering Himachal Pradesh.

Pangong Tso lies closer to the centre of this 826 km long disputed border in eastern Ladakh.

Where is Pangong Tso lake?

Pangong Tso is a long narrow, deep, endorheic (landlocked) lake.

It is situated at a height of more than 14,000 ft in the Ladakh Himalayas.

The brackish water lake freezes over in winter, and becomes ideal for ice skating and polo.

In the Ladakhi language, Pangong means extensive concavity, and Tso is lake in Tibetan.

What is the significance of the lake?

Pangong Tso Lake has major tactical significance as it lies in the path of the Chushul approach.

This approach is one of the main approaches that China can use for an offensive into Indian-held territory. Indian assessments show that a major Chinese offensive, if it comes, will flow across both the north and south of the lake.

During the 1962 war, this was where China launched its main offensive.

Does the region have enough connectivity?

Over the years, the Chinese have built motorable roads along their banks of the Pangong Tso.

At the Huangyangtan base of the People's Liberation Army at Minningzhen, southwest of Yinchuan stands a massive to-scale model of this disputed area in Aksai Chin.

It points to the importance accorded by the Chinese to the area.

Even during peacetime, the difference in perception over where the LAC lies on the northern bank of the lake, makes this contested terrain.

1999 road - In 1999, the Army unit from the area was moved to Kargil for Operation Vijay. China took the opportunity to build 5 km of road inside Indian territory along the lake's bank. The 1999 road added to the extensive network of roads built by the Chinese in the area, which connect with each other and to the G219 Karakoram Highway. From one of these roads, Chinese positions physically overlook Indian positions on the northern tip of the Pangong Tso lake.

What are the "Fingers" in the lake?

The barren mountains on the lake's northern bank, called the Chang Chenmo, jut forward in major spurs, which the Army calls "fingers".

Claims - India claims that the LAC is coterminous with Finger 8, but it physically controls area only up to Finger 4.

Chinese border posts are at Finger 8, while it believes that the LAC passes through Finger 2.

Six years ago, the Chinese had attempted a permanent construction at Finger 4, which was demolished after Indians strongly objected to it.

Chinese use light vehicles on the road to patrol up to Finger 2, which has a turning point for their vehicles. If they are stopped by an Indian patrol in between, asking them to return, it leads to confusion, as the vehicles can't turn back.

Recent tensions - The Indian side patrols on foot, and before the recent tensions, could go up to Finger 8.

Fracas between Indian and Chinese soldiers in May, 2020 happened at Finger 5, which led to "disengagement" between the two sides.

The Chinese have now stopped the Indian soldiers moving beyond Finger 2. This is an eyeball-to-eyeball situation which is still developing.

What is the conflict on the water?

On the water, the Chinese had a major advantage until a few years ago, their superior boats could literally run circles around the Indian boats.

But India purchased better Tampa boats some 8 years ago, leading to a quicker and more aggressive response.

Although there are well-established drills for disengagement of patrol boats of both sides, the conflicts on waters have led to tense situations.

The Chinese have moved in more boats (the LX series) in the lake after the tensions which rose in the area from last month.

The two sides agree upon the drill for the boats, as per the Standard Operating Procedure.

What is the drill?

After a boat from the other side is spotted moving into own waters, an equal number of boats are despatched to confront the intruders.

The boats stop about 20 feet apart, and both sides unfurl the banners.

Both banners are on red cloth, with white lettering urging the other side to return in the interest of peace and tranquillity

The patrol leaders on the respective boats then shout out the same messages using loudhailers.

The standoff continues for about 10 minutes, each side asks for their banners to be lifted.

Both sides then unfold another set of banners, which reads: "In the interest of peace and tranquillity we are returning to our side and we trust you will do the same".

The boats then move away and return to their respective sides.

What happens if a Chinese boat suddenly makes a move?

The Chinese boats may try to make a move and get into Indian waters.

Then, an Indian boat tails it, first giving it a chase and then circling it with high speeds.

This tactical manoeuvre, called a "whirlpool", traps the aggressor boat in high currents, forcing it to return as it begins to dip into an eddy.

